fueloil & oil heat

AUGUST 1959
★ ★ ★
EDITION

37 Years devoted to Progress in Oilheating and Airconditioning

Significant ✱ Burner

Shell's new blue-flame Unit is uncomplicated

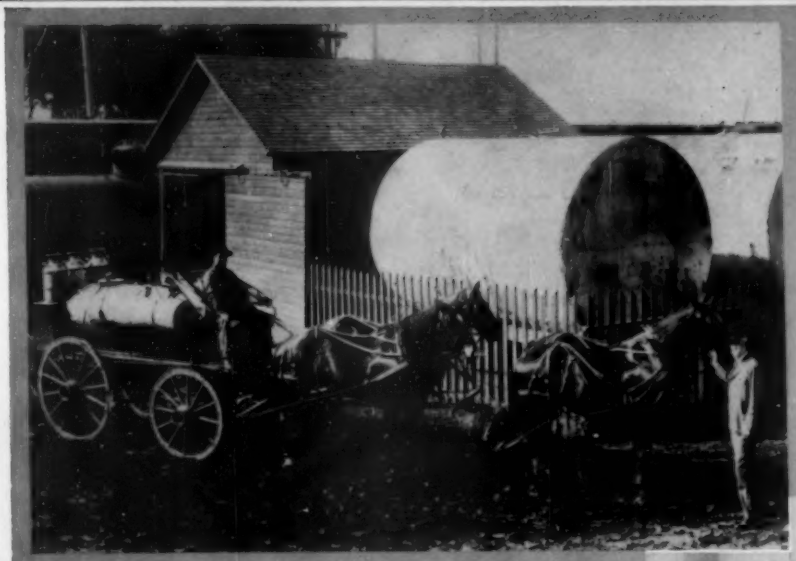
Fueloil ✱ credit Manual

Seattle Group offers Volume to All

Drying out ✱ the Air

Dehumidification helps Comfort, too

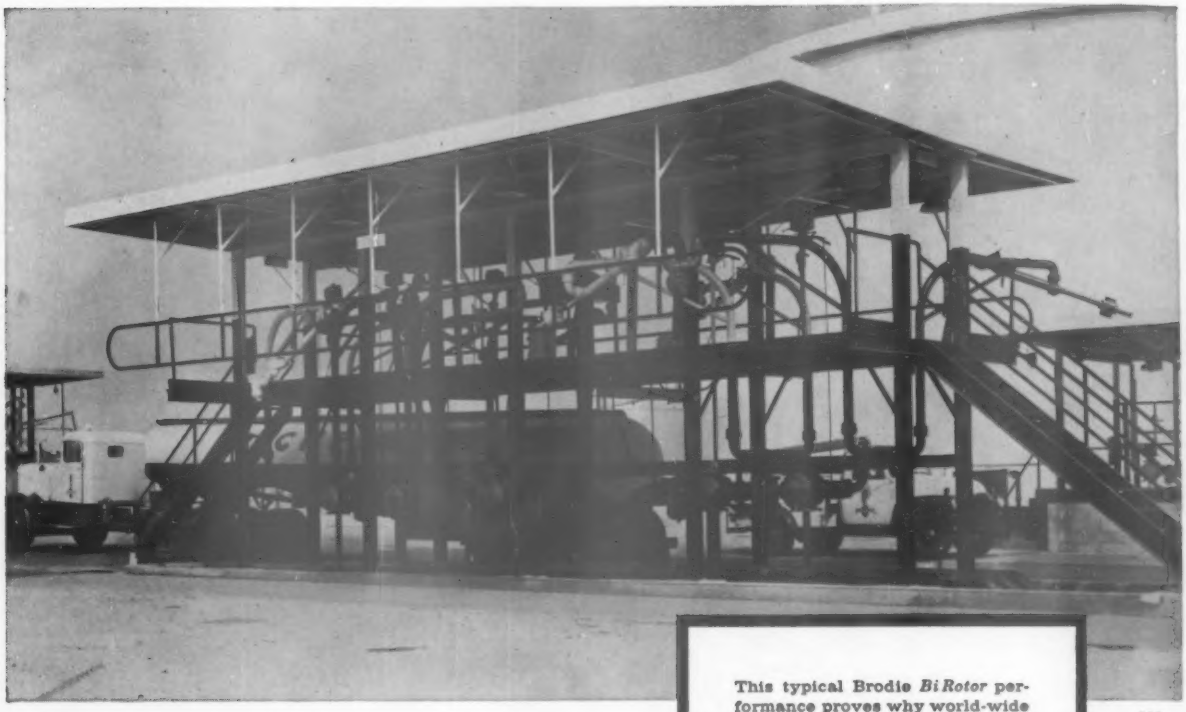
Oil heat ✱ Parade for Centennial



Horse-drawn comfort typified the early days of fueloil—as did this "early American" oilburner installation. Yet today, modern fueloil delivery methods, plus modern, efficient oilheating bring comfort to millions of Americans.

The foreign look — street vendors selling oil this way would measure each sale on the spot. In America, meters on fueloil delivery trucks have been used widely for many years.

OIL'S FIRST CENTURY
-BORN IN FREEDOM
WORKING FOR PROGRESS



This typical Brodie *BiRotor* performance proves why world-wide acceptance has grown through three decades of service. If you're planning a metering installation—call on Brodie experience—as near as your phone!

908

Here's real, low-cost maintenance

...only $1.13* per year maintenance on 10 Brodie *BiRotor* Meters...with average thruput of 3½ million gallons a month. *(per meter)

EVERYWHERE • BRODIE is linked with Progress.
Here's another example from SOUTHERN CALIFORNIA

Here are actual cost-saving facts about the durability of Brodie *BiRotor* Meters—shown by the records on Richfield's Colton Bulk Plant in California: This plant was put into operation in March, 1956 with 10 Brodie *BiRotor* Meters and accessory equipment. Average thruput is 3½ million gallons per month—gasolines, kerosene and diesel. Total expenditure for 3 years on maintenance for *BiRotor* Meters, Brodimatic Counters and Printers, and Strainers has been $33.92—$1.13 per meter! Further proof you don't have to "baby" Brodie *BiRotor* Meters—operate them at full rated capacity.

RALPH N. BRODIE COMPANY
San Leandro, California, U.S.A.
CABLE ADDRESS: "BRODICO"

MT. VERNON, N.Y., 550 So. Columbus Ave.
DALLAS 7, TEXAS, 167 Parkhouse St.
SEATTLE 9, WASH., 221-9th Ave. N.
CHICAGO OFFICE: 1227 Circle Ave., Forest Park, Ill.
LOS ANGELES 22, CALIF., 5401 Sheila Street

BRODIE
BiRotor METERS

REPRESENTATIVES WITH STOCKS AND SERVICE FACILITIES IN ALL PRINCIPAL CITIES

HOW SUNDSTRAND FUEL UNITS BACK UP YOUR BURNERS

Assure Customer Satisfaction With Sundstrand Certified Service

Here's a case where the best costs no more—so why settle for substitutes that won't meet standards set by you or your customer? Genuine Sundstrand parts are available at Sundstrand Certified Service Stations carefully assigned across the nation and displaying this decal.

Quality parts and expert service by factory trained specialists are yours whenever you bring your fuel unit to a Sundstrand Certified Service Station. Because these service stations are located wherever Sundstrand-equipped oil burners go across the nation, you are assured of quick, easy, economical service that contributes materially to customer satisfaction. Heating contractors, as well as oil burner manufacturers, have come to know that the combination of original quality and certified service, available only from Sundstrand, is the best insurance for continued heating comfort. It's no accident that year after year Sundstrand remains *first in fuel units.*

SUNDSTRAND

SUNDSTRAND HYDRAULICS

DIVISION OF SUNDSTRAND CORPORATION

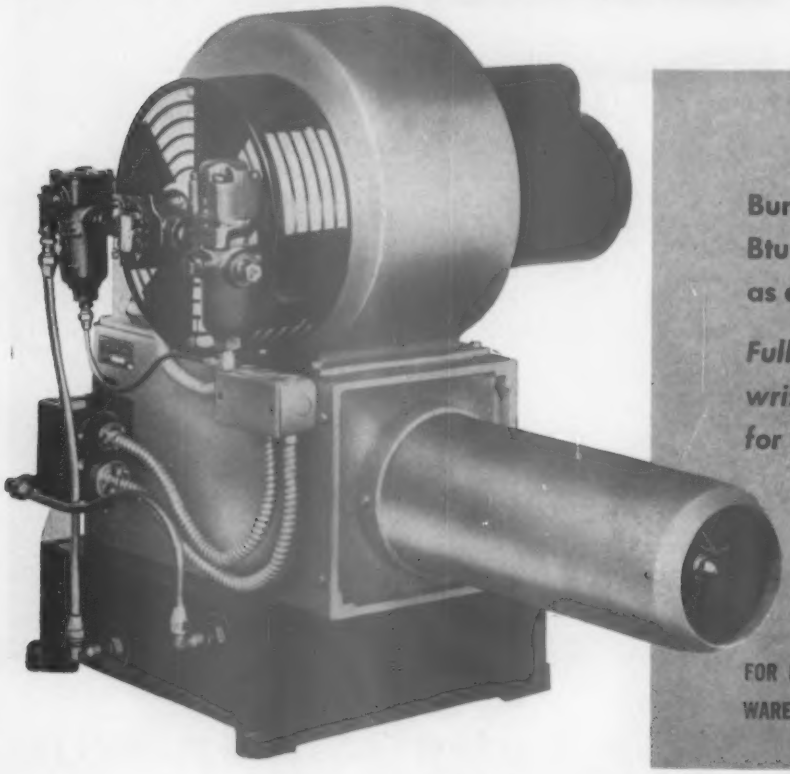
(formerly Sundstrand Hydraulic Division, Sundstrand Machine Tool Co.)

2210 Harrison Ave., Rockford, Ill.—Eastern Sales Office: 89 Summit Ave., Summit, N. J.
Made in Canada by John Inglis, Ltd., 14 Strachan Ave., Toronto; in Sweden by Sundstrand Hydraulic AB Stockholm; in France by R. S. Stockvis, et Fils, S. A., 20-22 Rue Des Petits-Hotels, Paris.

fuel oil & oil heat

HOTTEST SELLER FOR THE COMMERCIAL MARKET

SUN-RAY #5 OIL BURNER



Burns LOW COST, higher Btu #5 (and #4) fuel oil as efficiently as #2 oil.

Fully approved by Underwriters' Laboratories, Inc., for #5 oil.

CUTS FUEL BILLS

FOR FACTORIES, SCHOOLS, CHURCHES, WAREHOUSES, APARTMENT BLDGS., etc.

Read What Dealers Say

OPERATORS HEAT, INC.
Baltimore, Md.

"I want to tell you about the field tests we have run on your #4 Oil Burner over the last fifteen months.

"Several things have stood out:

1. The Boilers have stayed much cleaner.
2. The Burners have been considerably quieter than the ones they replaced, whether light or heavy oil burners.
3. We noticed no difference in burning #4 and #5 oil except a little more pressure was used.

"Our service people and our customers are very happy about the operation of your heavy oil equipment."

Hollis Albert, President

NASSAU MUTUAL FUEL CO.
Hempstead, N. Y.

"Until approximately a year ago we installed nothing but rotary type #5 oil burners. Then, because it was impossible to install one in a particular job, we used our first Sun-Ray #5 Oil Burner.

"May I take this opportunity to thank you for putting out such a wonderful piece of equipment. Not only is it more economical and easier to install, but its efficieney, quietness and trouble-free service are beyond reproach.

"You can be sure we have installed Sun-Ray Burners since, and will continue to do so."

E. A. Werner, Jr., Vice-President

OIL BURNER UTILITY CO.
Woodside, N. Y.

"I would like to take this opportunity to compliment your company on your oil burner.

"Never having used any 4 or 5 oil equipment before, due to the service and installation problems of other units, I forfeited those sales in the past, until I tried one of your burners in July of 1956.

"Having found that the installation and service of your unit is comparable to a #2 oil burner, we began a campaign for this type of work. To date this has proved very profitable for us, with a nice increase in sales, oil gallonage and satisfied customers. We are frankly amazed at how little service these burners require and how well they work."

Max Hachmann

Get the facts. Get the Sun-Ray sales story.

SUN-RAY BURNER MANUFACTURING CORPORATION

139-22 Queens Boulevard, Jamaica 35, New York

AUGUST fueloil & oilheat 1959

VOLUME 18 NUMBER 8

Editorial, circulation and advertising Office: 2 West 45th St., New York 36, N. Y.

CONTENTS

SUBJECT	PAGE	AUTHOR
Significant Burner in Progress Parade	49	JOHN W. SCHULZ
A group Effort pays off	53	V. M. DOUGLAS
Fueloil credit Manual	55	
How successful are You?	57	PAUL J. SPIEWAK
Draft Problems with Oil and Gas	59	
Drying out the Air	61	J. R. LEWIS
Standard (Ind.) announces burner Service	64	
Baltimore Builders discuss Fuels	66	
Blueprint for a Centennial Parade	67	

COMMERCIAL - INDUSTRIAL SECTION

Boilers on Roof save Space	73	
Ultraviolet flame Detector	78	

NEWS		DEPARTMENTS
	6	Editorial Leaks
I-B-R elects Reed and Quinn	16	
	8	Government on Fuels
52% of Canadian Homes heated by Oil	21	
	12	Names in the News
May construction Contracts show Gain	21	
	19	Oilheating Trends
Continental Oil buys Coastal	22	
	22	Fueloil Prices
Furnace with Windows built by Esso	22	
	25	Industry Groups
Report on Pacific Coast Promotion	70	
	90	New Products
New Books for Industry	114	
	106	Manufacturers' Activities

YEARLY: $3.00

CANADIAN: $3.00

SINGLE COPY: $1.00

COPYRIGHT 1959, HEATING PUBLISHERS, INC.
ALL RIGHTS RESERVED
NO PART MAY BE REPRINTED WITHOUT WRITTEN PERMISSION

PUBLISHED MONTHLY
BY HEATING PUBLISHERS, INC. ADDRESS ALL CORRESPONDENCE FOR EDITORIAL, ADVERTISING AND CIRCULATION DEPARTMENTS TO: 2 WEST 45TH STREET, NEW YORK 36, N. Y. PHONE: MURRAY HILL 2-4786. PUBLICATION OFFICE: 109 MARKET PLACE, BALTIMORE 2, MD. ESTABLISHED 1922. ENTERED AS SECOND CLASS MATTER AT THE POST OFFICE AT BALTIMORE, MD.

ROBERT GRAY, *Editor*

Bert Dunphy, *Managing Editor* John W. Schulz, *Technical Editor*
V. M. Douglas, *Midwest Editor* Margaret Mantho, *Assistant Editor*
George F. Farrell, *Circulation Director*
A. G. WINKLER, *Advertising Director*
Lee Steedle, *Advertising Manager*
Dick Raymond, *Eastern Advertising Manager*
Ruth Wertheimer, *Advertising Production Manager*

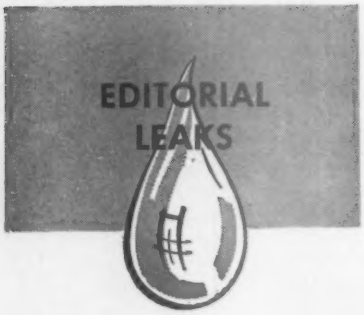
Larry Alles, *Midwest Manager*
Room 200 *Chicago 4, Ill.*
224 S. Michigan Ave. *Phone: Wabash 2-9548*
Pacific Coast Representative: Don Harway
1709 West 8th St., Los Angeles 17, Cal. Phone: Hubbard 3-5141

Among other things . . .

John Schulz in the lead article this month (starts on page 49) takes a look at the accomplishments of the Shell Laboratory and the developments it has produced over the years. There's also a diagram and description of Shell's low-capacity, high efficiency oilburner, containing more than the usual detail.

Other timely items include a run-down of the approach taken by Standard of Indiana in offering oilburner service in selected areas (page 64) and a National Fueloil Council memo telling how to organize a fueloil truck parade as an Oil Centennial event.

Cover photo: A few nostalgic photographs—from a kit prepared for the Centennial by National Fueloil Council—depict scenes of days gone by which, happily, have been changed—and for the better—by the advent of petroleum products and, especially, heating oil.



THE FLORIDA Home Heating Institute has a new piece of literature under the general theme, "You're Lucky to Live in Florida, but Let's Face It . . . Florida Homes do Need Heat." Reminiscent of year before last, the state can get cold at times. That's why another group, the Better Home Heat Council of Florida, Inc., has raised money for the second largest single cooperative advertising program of the National Fueloil Council. Including refiner support, it totals over $132,000.

The Florida Home Heating Institute works primarily in the Miami region and is very active in the promotion of oilburning equipment. Its largest supporter is the Florida Power & Light Co., which has a double incentive to help oilheating all it can. It does not want electric heating on its lines because the winter is already its peak demand season. It would prefer to not have gas piped into the homes to threaten its cooking load, so helping oilheating is the natural outcome. These cogitations are not openly discussed but they're the elementary motivations.

And now that residual oil is down in price making it attractive to the large buyers of energy for power, the gas pipeline builders are finding the going a little rough.

AND SPEAKING of Florida, whose largest single fueloil marketer is Belcher Oil Co. of Miami, and the imaginative ad written for the "Belcher Gas Co." by that oilheating luminary Herb Spade, there was no connection implied.

It was at the sixth promotional conference of National Fueloil Council in June at New York that Herb "doodled" an ad for a gas company on a scratch pad and then read it. He called it a "gas utility ad the way a fueloil man would write it." The text follows:

"NOBODY, BUT NOBODY gives you better gas heat than the BELCHER GAS CO.

"BELCHER GAS has two safety odors added. When you have a leak our rotten egg smell lets your nose know . . . if you can't smell our onion odor will make you cry.

"BELCHER GAS is sweet—it has low sulphur and acid content so that pipes and heaters corrode away s-l-o-w-l-y. Furthermore our soot is soft and it comes off easily.

"BELCHER GAS is delivered to you through many regulating valves so that the pressure is just right—never high enough to cause explosions, never so low the pilots go out.

"BELCHER GAS comes to you from a far-away land. Super human efforts and high, high pressures keep it coming—over plains and mountains—under rivers—through 2,000 miles of pipe lines that seldom break.

"BELCHER GAS is also stored locally —a whole day's supply.

"BELCHER GAS has practically the same heat content all the time. We check this constantly and enrich it when necessary in a sincere effort to give you what you pay for.

"BELCHER GAS customers can call on us for certain services any time of day or night. Our service trucks—and even the pleasure cars without our name on them—are all equipped with *both* RADIOS *and* FLASHING RED LIGHTS —you can be sure we will get there FAST.

"BELCHER GAS customers can always negotiate with us for an additional week, or even two weeks, if you need more time to pay your bills.

"BELCHER GAS will soon announce a new free life insurance plan which will be included in our rates.

"DON'T WAIT—change to BELCHER GAS now so that you can call on us the next time you have trouble."

IN THE July issue we were noting on this page that the Oil Heating Institute back in 1928 had a national advertising campaign for oil heat with most of the promotional emphasis built on the comparison with sunshine. Their slogan was "Oil Heat is Benevolent as Sunshine." A suggestion was made that we now consider the thought for ad copy, "Bring Sunshine Indoors with Oil Heat."

Two of the boys at Shell, Bob Carr and Jim Harahan, pointing out that great minds sometimes run, etc., and that imitation is sincerest flattery, send photos of some of their billboard series, of which two are shown here.

All right, Shell did it first for this decade, and we hope it got them some business, as this theme should do.

WITH THAT explosion of the butane tank cars in Georgia coming so soon after the propane tank blowup near Pottsville, Pa., a subscriber writes that the only safe place for a pedestrian would be up in the air or at sea, preferably oilheated.

PARAGON OIL CO., New York, long considered the largest independent oil marketer in the country, has now become a part of Texaco through a stock transfer. The unconfirmed price is said to be above fifty million dollars. With New York and New England terminals, its own fleet of ocean tankers, a lube compounding plant, a furnace factory for oilheating among other accoutrements, Paragon and its top man Henry Schwartz deserves a lot of industry recognition.

Texaco has been moving deeper into direct action in the fueloil field, and this large acquistion demonstrates pretty conclusively that the company's officials think well of its future.

Bob Gray

BEFORE YOU DECIDE ON ANY TIGHT-FILL SYSTEM it will pay you to read these facts...

Fuel Oil Delivery efficiency, and your profit, are dependent upon the proper relationship

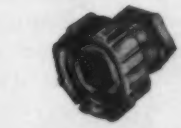
OF TWO FACTORS: { **THE HUMAN ELEMENT** / **THE MECHANICAL EQUIPMENT UTILIZED**

The aim of the Scully Signal Company is to DECREASE the burden on the driver and INCREASE the work done by the Mechanical Equipment.

WE RECOMMEND THREE STEPS:

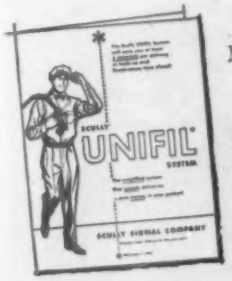
1 that you make sure ALL your inside tanks are equipped with the VENTALARM® Signal. At the start of filling, the driver should hear the VENTALARM Signal whistle, or stop filling immediately. The sound of the whistle assures that the tank is receiving oil properly and that the vent is clear. The protected resonance chamber, an exclusive feature of the VENTALARM Signal, is of great importance. No bugs, scale, or foreign matter which can interfere with the whistle can enter the resonance chamber.

"Fill only while the whistle blows"



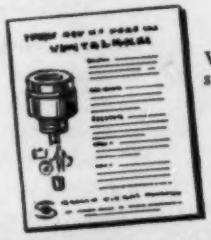
2 that you install the UNIFIL System, the culmination of twenty years' experience with tight connections. The UNIFIL Connector on your nozzle and a UNIFIL Adaptor on every fill pipe makes every connection identical. The driver does not even carry tools. The nozzle connector incorporates a means for locking and unlocking the cap, which can be tightened to prevent tampering by children. The identification disc on the cap prevents misdeliveries and is an advertising medium. The cap is an all-weather cap and is designed to open readily under any adverse weather conditions. The UNIFIL System, even without increasing pumping speeds, repays its cost every heating season.

3 Once you are equipped with the VENTALARM Signal and the UNIFIL System, you can secure additional benefits by adjustments to your present truck equipment, or by the purchase of new truck equipment.



MORE FACTS are in these folders. Write for your copies.

UNIFIL System of tight connections is described, including various adaptors for making all fill pipe entries same size.



VENTALARM Signal safety and speed features are described.

OHI

Hundreds of thousands of installations of the UNIFIL System, in conjunction with the VENTALARM Signal, are now DECREASING the burdens of the drivers and INCREASING the profits of the oil companies. From no other source can you get all of the advantages of these Scully-developed products and systems. That is also a fact.

SCULLY SIGNAL COMPANY

176 Green Street • Melrose 76, Massachusetts

IN CANADA: E. S. Gallagher Sales, Ltd. — 10 Hafis Road, Toronto, Ontario

fuel oil & oil heat

by James M. Collins

WASHINGTON—As Congress nears the end of the current session, little has been done affecting the fuels picture, despite the prospects early this year that active investigations might be held, ranging all the way from the well to the consumer.

Most active on Capitol Hill has been the coal industry, which seems to be making some gains in its drive to hobble other fuels and to obtain a favored position for itself. It seems almost certain now that if a gas bill is to be passed—either next year or later—it will contain language to prohibit "dump" sales of natural gas by the interstate pipelines during off-peak times of the year. The Harris Bill, which never got off the ground this year because the Eisenhower Administration declined backing for it, contained language to give the FPC authority to control industrial gas sales by the pipelines.

Now, the House Interior Committee has adopted a resolution calling on executive agencies of the government to "develop new policies" aimed at helping out depressed domestic fuels and minerals industries—such as coal, after holding a series of hearings recently. A bill already has been adopted to set up a coal research agency, outside of the Interior Department.

Depletion Attack is Beaten

In a test vote in the Senate, depletion allowances for oil and gas were supported by a vote of 54 to 21 after Senator Douglas (D., Ill.) proposed reducing the 27.5% rate downward to 15%, on a graduated basis. Counting senators who were absent, but who indicated how they would have voted if in the Senate at the time the vote was taken, the vote would have been 61-to-29 against Douglas' proposal. Most encouraging sign for the industry was the votes of senators just elected last November, whom it had been feared might be overwhelmingly opposed to the oil-gas depletion allowance. Of 18 new senators (including the two from Alaska), only five voted for the Douglas amendment, while ten opposed it. Three did not indicate how they would vote.

However, there is doubt that the Senate vote indicates the real attitude on the depletion allowance. For one thing, the vote came as an amendment to an urgent bill to extend certain excise taxes, and time was short. Senator Williams (R, Delaware) who opposes the 27.5% allowance, warned Douglas that he had picked the wrong time and bill for his attack.

Insiders on Capitol Hill, who are close to the situation, believe that the real showdown on this tax provision will come next year, in 1960. They believe that the number of senators voting against this provision—as it applies to domestic output—may be as high as 40. If the attack narrows down to the depletion allowance on foreign oil, then the vote to cut the rate may be much higher.

Import Controls Watched

Meanwhile, there is every indication that the Administration intends to maintain a tight control on oil imports, waiting to see what develops during the next several months on prices. So far, prices have remained weak, due to oversupply of crude domestically in states that do not have strict proration laws, and because of the high rate of refining operations.

Senator Carlson (R., Kansas), in a speech on the Senate floor, said that controls on imports have been successful in "many respects," but he complained that stability of prices for both crude and products is still lacking. He pointed out that crude prices are now about 10 cents a barrel below year-ago levels, and 13 cents less than two years ago so "any fears of high petroleum prices as a result of the mandatory oil import program are groundless."

West Coast Case Settled

The government took a big defeat in the consent decree settlement of the big West Coast oil case, with the companies agreeing to provisions that apparently will make no significant changes in their operations. Fate of this case was foretold when the judge, at a side hearing long ago, ruled out the government's request for the divorcement of suppliers from marketing. At least one senator from the West is now readying a highly-critical speech, which he probably will deliver on the floor of the Senate.

DJ wins Sun Case

However, in another case, charging the Sun Oil Company with exclusive dealing, the government won big. This decision completed the Justice Department's three-pronged attack on exclusive dealing in oil. The DJ earlier had won two other cases in the Supreme Court (Standard Oil Company of California and Richfield). The three cases encompassed written contracts, oral contracts, and a mixture of both.

Pipeline Attack Subsides

Attacks on oil pipeline "control" have now simmered down, following release of the House antitrust subcommittee's report in which a majority of democrats urged, in effect, "divorcement" from shipper-owners, and the Supreme Court's decision holding that the consent decree under the Elkins Act does not bar dividends to the shipper-owner, which are based on borrowed money in the pipeline base. However, there is now some speculation—and that is all—on Capitol Hill that the Justice Department may seek to test its borrowed-capital argument again (outside the consent decree) by going into court against some pipeline not covered by the decree in 1941 because it was then on intrastate carrier, but is now hauling oil across state lines. One indication of the Department's attitude could come in its next annual report on the Interstate Oil Compact, due in about two months.

Oil Prices Trend Downward

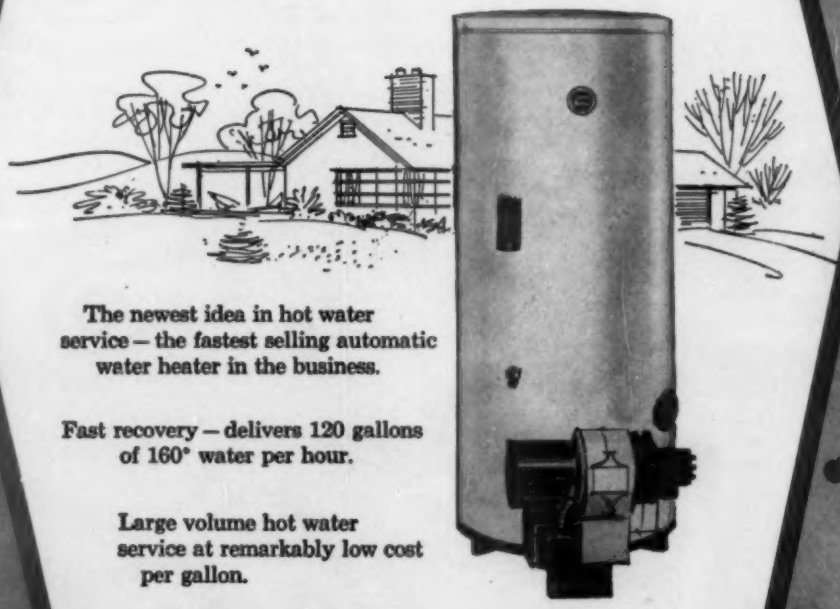
Government officials are now carefully watching oil prices, in relationship to the oil imports program, but so far they have noted only downward trends in crude oil and products. But, there is a belief fueloil prices will firm up hard this fall.

YOU SELL MORE BECAUSE...
YOU HAVE MORE TO SELL

WITH THE JOHN WOOD FULL LINE

plus

OIL-FIRED
WATER HEATER



The newest idea in hot water service — the fastest selling automatic water heater in the business.

Fast recovery — delivers 120 gallons of 160° water per hour.

Large volume hot water service at remarkably low cost per gallon.

A big seller in high cost fuel areas — minimum competition — good profit margins.

JOHN WOOD COMPANY

Heater and Tank Division

Conshohocken, Pennsylvania • Chicago, Illinois

QUALITY PRODUCTS JOHN WOOD SINCE 1861

"Our Ford F-1000's take the long grades with less down shifting!"

says L. W. Bullock, President
Butane Wholesale Gas Company, Little Rock, Arkansas

"Ford Super Duties have all the power and performance we could want. Our over-the-road transports haul 7,250 gallons of butane and propane for a gross combination weight of 59,000 pounds every trip. And with Ford tractors, our drivers can take the long grades in 7th gear of an 8-speed transmission—compared with 4th or 5th gear on other trucks we've used with 10-speed transmissions.

"Our four Fords with 477-cu. in. Super Duty V-8's have covered over 273,000 trouble-free miles, and the only maintenance we've done was to replace spark plugs and points. We never have to add any oil between our regular 5,000-mile changes.

"Experienced drivers say that these Fords are the best darn trucks they've ever driven, and they take care of them like they were their own. We have more Fords on order right now, and plan to have nothing but Ford F-1000 tractors for our bulk transport fleet within the next 18 months."

One day in five... GAS FREE!						
Sun.	Mon.	Tues.	Wed.	Thurs.	FREE DAY	Sat.
	1	2	3	4	5	6

'59 FORD PICKUPS GIVE 25.2% MORE MPG!

25.2% advantage delivered in Economy Showdown Tests means five days' driving on four days' gas

A leading automotive research group proved that a '59 Ford Six Pickup will run five days on the same amount of gas the average competitive '59 pickup burns in four days.

The tests were made on 1959 six-cylinder ½-ton pickups of the six leading makes purchased from dealers—just as you would. The trucks were tested in every kind of driving—high and low speeds, open highway and city streets, even simulated door-to-door delivery. And in every test '59 Ford Sixes delivered more miles per gallon than any other make.

Here are the actual percentages:

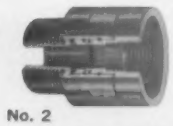
'59 FORD PICKUP SIXES GAVE

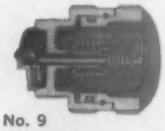
42.6% better mileage than make "D"
31.1% better mileage than make "I"
25.2% better mileage than make "C"
22.0% better mileage than make "S"
9.6% better mileage than make "G"

What's the secret of Ford's economy? First, of all pickup sixes, only Ford has modern Short Stroke design which reduces engine friction and thus requires less fuel. Second, to this modern engine, Ford has added a new economy carburetor to meter fuel more precisely in both high- and low-speed ranges.

Your Ford Dealer has the complete report of Economy Showdown U.S.A. See him right away and get the whole story firsthand.

All tests conducted and results
CERTIFIED
by America's foremost independent automotive research organization*
***NAME AVAILABLE ON REQUEST**
Send inquiry to P.O. Box 2687, Ford Division
Ford Motor Co., Detroit 31, Michigan


No. 2


No. 9

No. 17-ST

OPW
HOSE
SWIVELS

Prevent Hose Kinks!

Strongest link in your hose line..

WON'T PULL APART!

- NO HAZARD
- NO PRODUCT LOSS
- MAXIMUM HOSE LINE FLEXIBILTY

Make your hose easier to handle . . . add to its life . . . eliminate twisting, kinking and tension resulting from rotary motion. Use OPW's leakproof swivels with liquids dispensing nozzles and on industrial hose installations. Turns freely at line pressure up to 125 psi.

FREE BULLETIN F-37 provides interesting facts.

OPW CORPORATION

2723 Colerain Ave.
Cincinnati 25, Ohio
Kirby 1-5400

Names in the News

Roland A. Hazell has been made manager, National Steel Boilers, Heating and Air Conditioning Division, National - U. S. Radiator Corp., Johnstown, Pa. He has been affiliated with the company since 1925 and had been manager of the Canadian branch for three years and prior to that manager of the Buffalo branch.

Charles Rehmann has been named architects and engineers contact man for the greater New York area by Wymbs, Inc., New York, eastern seaboard distributors for Hev-E-Oil Burner equipment. Prior to this appointment he had covered the New Jersey and Eastern Pennsylvania territories for Hev-E-Oil Burners during the past five years.

P. T. Lomenzo has been appointed manager, Fuel Oil Division, The Atlantic Refining Co., Philadelphia, Pa., succeeding *E. D. Walter* who becomes district sales manager, Wilkes-Barre, Pa.

Lomenzo joined the company in 1939 and has had extensive experience in dealer sales and training.

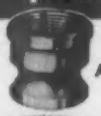
Lomenzo

Walter

Here's proof

Superior quality forged body —precision machined
Uniform wall thickness —no weak spots
Extra heavy reinforcing rim
Larger diameter cam ears for longer service life
Extra Hi-Strength forged handles —greater economy
Stainless Steel pins —greater safety and longer service
Uniform heavy wall thickness —no weak spots
Recess retains gasket in coupler and assures proper placement
Superior quality forged body —precision machined —accurate tolerances

your best buy is EVER-TITE -the best quality quick couplings


A

B
Adapter and Coupler

F

EVER-TITE Adapter and Coupler

D

E

EVER-TITE Shank Hose Coupling

C

Every EVER-TITE saves time and money

Bronze
Aluminum
Stainless
Carbon
Malleable
Hastelloy

You save time and money when you use EVER-TITE COUPLINGS, because you get speedy deliveries—no leaks.

The tightness is predetermined in manufacture so you can be *sure* with EVER-TITE.

The EVER-TITE trademark is a hallmark of dependability. EVER-TITES do the best job in the transfer of every type of product through hose or pipe.

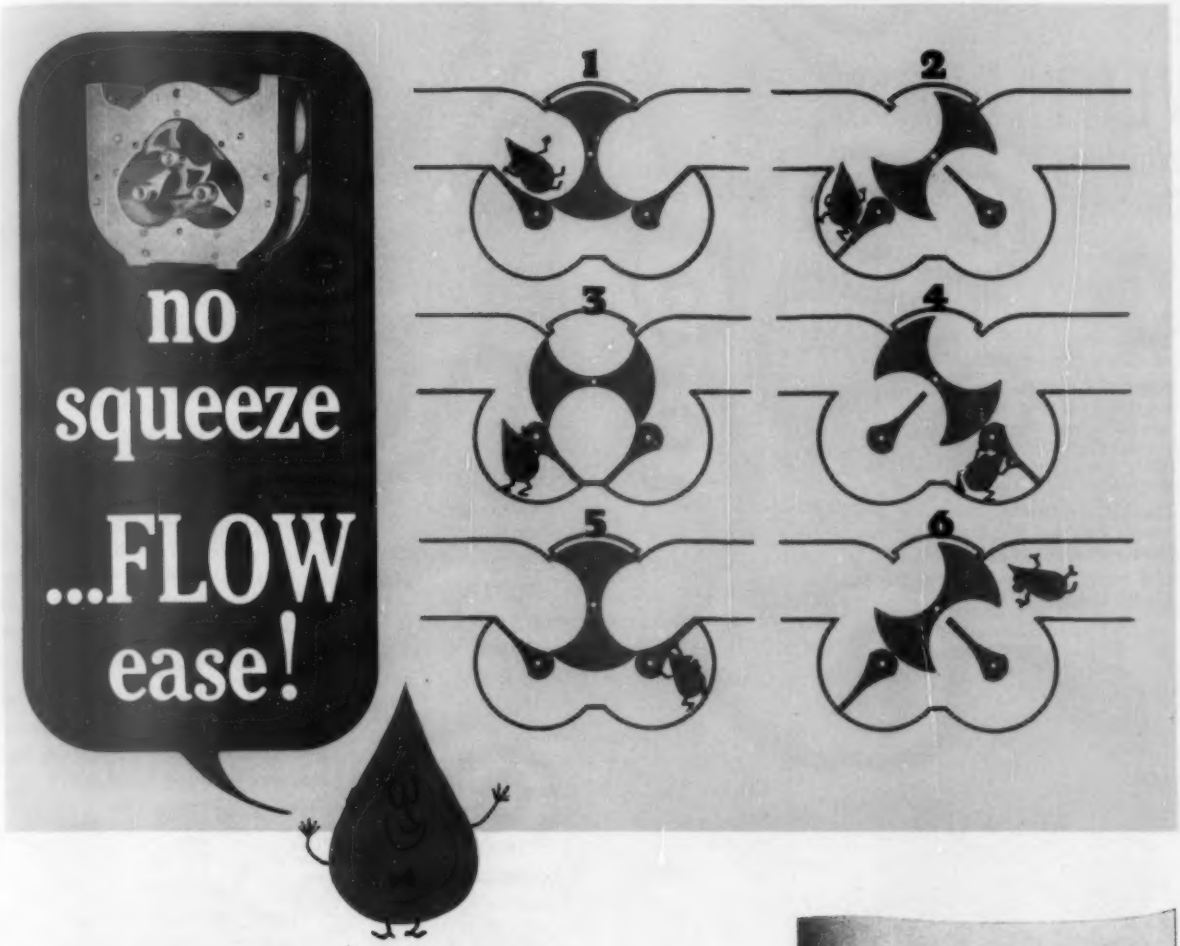
Get EVER-TITE and get the *best*. Ask your distributor now.

EVER-TITE COUPLING CO. INC.
254 West 54th Street
New York 19, N. Y.

Dust Plug

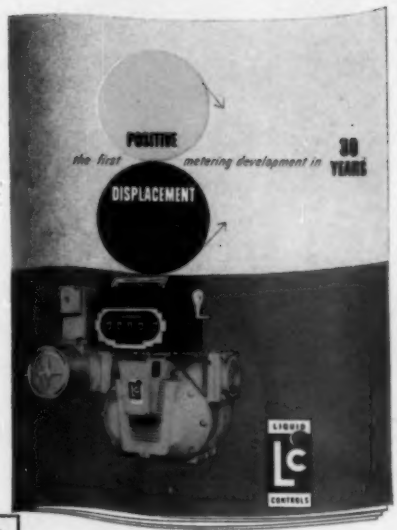
Dust Cap

EVER-TITE Dust Protectors



New **6-STEP** Positive Displacement Meter features low pressure loss, high accuracy.

Liquids flow smoothly through an LC Meter—they're never squeezed, never expanded. Pressure loss is minimized. Accuracy and meter life hit new highs. The reasons? LC's simple, true-rotary movement has no reciprocating or oscillating parts, no metal-to-metal contact in the measuring chamber, no axial thrust and no heavy bearing loads (induced by compressing trapped liquid, or by drawing a vacuum at any phase of the cycle). This higher hydraulic efficiency permits installation savings in sizing lines, pumps and motors. It also permits installation and operation of LC meters in series or in tandem without affecting calibration.



LIQUID CONTROLS CORPORATION
Commonwealth Avenue, North Chicago, Illinois

LC Meters . . . engineered for precision measuring of petroleum and commercial liquids

LIQUID LC CONTROLS

SEND FOR NEW FOLDER giving full facts on why the LC Meter insures greatly increased accuracy . . . see why it pays to "buy LC." Write today.

ONLY THE
VENTALARM®
Whistling Tank Fill Signal, the signal that revolutionized fuel oil delivery, gives you all of this...

CONFIDENCE — proved by literally millions of VENTALARM Signal installations.

PROTECTED RESONANCE CHAMBER — keeps bugs, scale and foreign matter out of the whistle. Eliminates expensive repeated maintenance. NFPA Standards of May, 1957, state "Vent Caps shall not employ screens."

EASY INSTALLATION — for new or old burner installations. Model LC for old tanks, Models LA and L for new tanks.

LOW COST — pays for itself in the first five deliveries.

Literature and prices are available. Write now to:

SCULLY SIGNAL COMPANY

176 GREEN STREET, MELROSE 76, MASS.

IN CANADA: E. S. Gallagher Sales, Ltd., 10 Hafa Road, Toronto, Ontario

The term "VENTALARM" is a registered trademark and is applicable solely to liquid level indicators, manufactured by the Scully Signal Company.

William Gaskell has been appointed central district manager, American-Standard Air Conditioning Division, New York, N. Y. He will be in charge of the Division's sales activities in an area from Michigan to Eastern Tennessee, including upper New York State and the western half of Pennsylvania. Gaskell joined the company early in 1958 as Boston district representative.

The Division has named the following district representatives: John Slein, New England area; Jan Winter, Midwest area; Bill Gregory, Wisconsin-Illinois territory; and Joel Leeson, Northern New Jersey, Westchester County and Long Island.

A. B. Carlson has been elected engineering vice president, H. D. Conkey & Co., Mendota, Ill. He has been with the Conkey organization for 24 years, serving in recent years as chief engineer. The company manufactures the Field barometric draft controls.

Daniel M. Doherty has been named press relations representative, Committee on Public Affairs, American Petroleum Institute. He succeeds *J. Richard Shaner* who resigned to join *Petroleum Week* after ten years as publicity manager.

Kent J. Worthen has been appointed national sales manager, two-way radio, Communication Products Department, General Electric Lynchburg, Va. He will direct the sales activities of 60 district offices throughout the nation and will coordinate the efforts of several hundred manufacturer's representatives who sell the mobile radio equipment. He has been with the company since 1949.

CLEANING POWER with the Portable NO. 521-8

take your SOOTMASTER in one hand hose and all

The Portable SOOTMASTER #521-8 weighing only 25 lbs. is the vacuum which offers the maximum filter area and largest soot chamber of any industrial cleaning unit of its size.

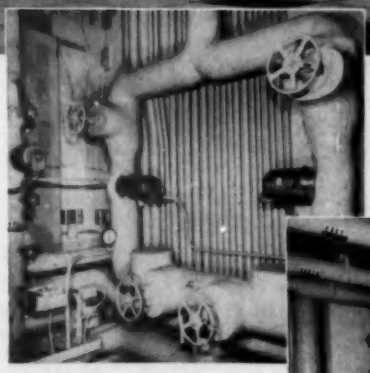
MASTERCRAFT'S exclusive hose-holder basket let's you carry the entire cleaner including the hose from job to job with only one hand. Users do more work with less effort.

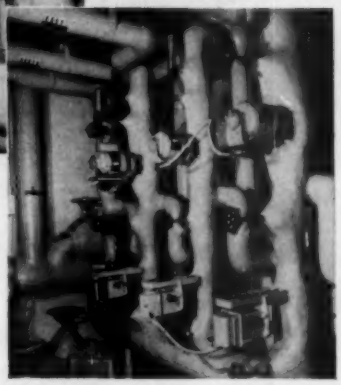
JOBBER DISTRIBUTOR ENQUIRIES INVITED

International Minerals & Chemical Corporation, Administrative and Research Center, Skokie, Ill.

Architects and Engineers: Perkins & Will
General Contractor: Turner Construction Co.
Mechanical Contractor: M. J. Corboy Corp.

"ENGINEERED FOR THINKING" ...WITH 22 QUIET B&G BOOSTER PUMPS





B&G Boosters installed in various heating circuits.

B&G BOOSTER PUMP

Hydro-Flo SYSTEM

BELL & GOSSETT
COMPANY

Dept. FV-7, Morton Grove, Ill.
Canadian Licensee: S.A. Armstrong, Ltd., 1400 O'Connor Drive, Toronto 16, Ontario

International Minerals and Chemical's new administration and research center, Skokie, Illinois, has been described as "engineered for thinking." In keeping with that objective, twenty-two *quiet* B&G Boosters were selected as the pumps for the heating circuits of the four buildings and the snow melting panels.

B&G Boosters and larger Universal Pumps are designed and built specifically for circulated water heating and cooling systems, in which they satisfy the all-important requirement of *silent, vibrationless* operation. Over 3,000,000 are today installed in such systems.

Among the features of B&G circulating pumps are specially built, more costly motors, tested for quiet running...oversized shafts of hardened alloy steel... long sleeve bearings...noise dampening spring couplers...oil lubrication and leak-proof mechanical seals. They can be serviced without removing from the line.

MAKE MORE PROFIT ON EVERY GALLON

FREEZE PROOF SELF EJECTING CAPS LIFT OFF EASILY—QUICKLY.

For easier, cleaner, faster fills—at any pumping speed—there isn't anything that will help your delivery man as much as a Speed-Kleen nozzle tube and fill pipe fittings. Make his job easier and also save on delivery costs—as much as $5.00 per customer per year—by simply replacing present fill pipe caps with Speed-Kleen fittings.

Don't continue losing profits, write or phone C.G. Eyster at

TIME SAVING FILLS, INC.
Phone York 6119
140 W. Market St., York, Pa.

I-B-R elects Reed, Quinn; dedicates research House at annual Meeting

MALCOLM C. REED, president, Dunkirk Radiator Corp., Dunkirk, N. Y., was elected chairman of the Institute of Boiler and Radiator Manufacturers at the recent annual meeting in Absecon, N. J.

Other officers are Daniel J. Quinn, Plumbing and Heating Division, American-Standard, New York, vice chairman; and I-B-R General Manager Robert E. Ferry, secretary-treasurer.

The membership approved plans for the expansion of industry research, testing and education and approved an Institute budget in excess of $250,000, an all-time high. The members also participated in ceremonies formally dedicating the new split-level research house.

The new hydronic research house in Urbana, Ill., was described by Warren S. Harris, research professor at the University of Illinois, as a tri-level dwelling that incorporates many hard-to-heat and hard-to-cool design features. The use of large glass areas, cathedral-type ceilings and many other modern design characteristics make it possible to study a wide range of current and future heating and cooling problems.

Arthur Wales, field training director, in a report on the Institute's educational program, cited case histories showing how dealers had increased their hydronics business after attending the I-B-R Heating and Cooling School.

It was announced that the 1960 schools will include two new publications as texts and that several of the existing I-B-R Guides will be revised based on results of latest hydronics research. One of the new publications will cover methods of reducing installation costs; the other describes installation techniques for small pipe hydronic systems.

In his annual report General Manager Ferry discussed various cycles experienced by the industry since the Institute's formation 44 years ago. He also discussed the status of a proposed rating code for hot-chilled water fan coil units. Work on the initial phases of the code has been completed and additional consultation with all groups which seek accurate ratings is planned in order to develop the code further.

Members of I-B-R's marketing research committee, headed by Harold C. Day, American-Standard, reported on the results of several studies conducted during the past year. A preliminary report of industry statistics was submitted. From this, I-B-R plans to develop a program which would enlarge the scope of its statistical research work, providing additional facts on volume of shipments.

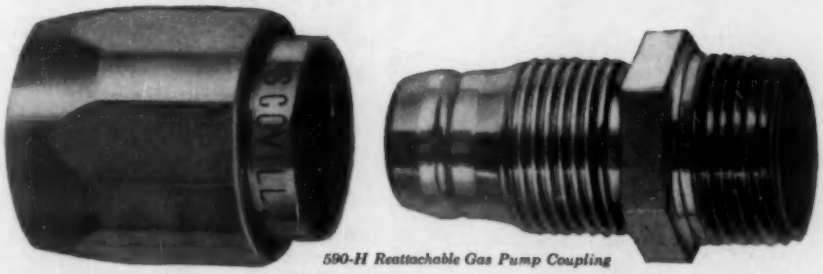
The following were elected to the Institute's executive board: T. L. Arnold, Fedders-Quigan Corp.; R. H. Bohr, Federal Boiler Co., Inc.; V. A. Good, Burnham Corp.; F. S. Hudson, Jr., National-U. S. Radiator Corp.; H. E. Kritzer, Kritzer Radiant Coils; M. Lundgren, Vulcan Radiator Co.; M. J. Murray, John J. Nesbitt, Inc.; R. G. Pinkerton, Peerless Heater Co.; S. K. Smith, H. B. Smith Co., Inc., E. R. Westphal, Weil-McLain Co.

Tri-level I-B-R Hydronic Research House will be used for studies of forced hot water heating, chilled water cooling and indirect water heating for hot tap water.

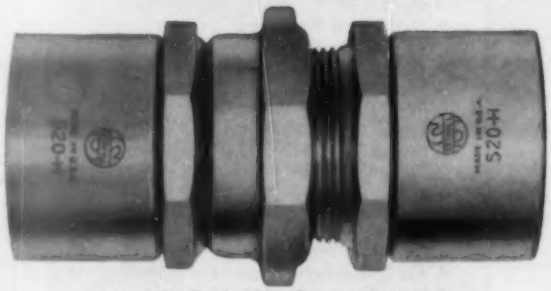
FIRST, FINEST, FASTEST

Scovill, who developed and introduced the permanently-attached hose coupling, provides the finest service and fastest delivery in the industry today. It pays in three important ways to specify permanent or re-attachable couplings by Scovill. 1 FIRST—Scovill has more know-how on the correct applications, uses and maintenance of hose couplings. Scovill was the first to design and manufacture couplings for modern hose and is the leading supplier of fuel oil and gas pump couplings. 2 FINEST—Only Scovill gives you such fast, efficient service because only Scovill has a nation-wide network of sales offices and warehouse facilities. 3 FASTEST—Coupling orders received by Scovill are shipped immediately. Scovill makes and stocks a complete range of fuel oil and gas pump couplings. And the Scovill sales and service force—the largest and finest in the industry—is ready to consult with you anywhere and anytime. *For complete details, write: Scovill Manufacturing Company, Hose Coupling Department, Waterbury 20, Connecticut.*

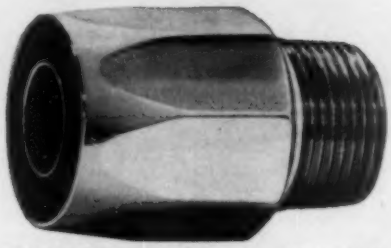
Hose couplings by **SCOVILL**



590-H Reattachable Gas Pump Coupling



520-H Fuel Oil Coupling, Permanently Attached



570-H Gas Pump Coupling, Permanently Attached

MAIN OFFICE: 99 Mill Street, Waterbury, Conn. CLEVELAND: 4635 W. 160th Street LOS ANGELES: 6464 E. Flotilla Street HOUSTON: 2323 University Blvd. SAN FRANCISCO: 434 Brannan Street TORONTO: 334 King Street East

A revolutionary new...

BRYANT Oil-Fired BOILER

ONLY BRYANT OFFERS SO MANY EXCLUSIVE SALES-MAKING HELPS!

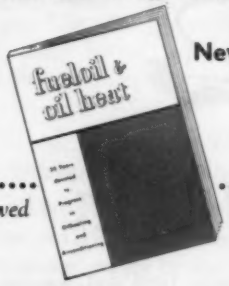
- **The Widest Selection** of models and prices to fit any market—furnaces, boilers, air conditioners, water heaters, unit heaters.
- **Exclusive Features You Can Sell**—backed by 51 years of engineering leadership.
- **Fast Delivery**—from complete local stocks.
- **Financing and Credit Assistance**—administered by local people who know *you*.
- **On-the-Spot Counsel**—sales, design, engineering, service, from local distributor or factory branch.
- **Sales and Technical Training** by specialists, both locally and at the Bryant plant.
- **Business Management Guidance** from factory and distributor to help you cut costs, get more business, make more money.
- **Local Ad Campaigns**—field tested, with Bryant factory and distributor participation.
- **Sound Selling Policies**—in effect for over 50 years—protect your business and profits.
- **National Reputation** with architects, engineers, builders, utilities and home owners helps you sell Bryant products.
- **Air Conditioning** gives big opportunity to *grow*.
- **Bryant's Financial Strength** protects your *future*.

bryant

Years Ahead in Year 'Round Comfort!

Oilheating & Airconditioning
MERCHANDISING NEWS

2 West 45th Street New York 36, N. Y.



Copyright 1959, Heating Publishers, Inc. All rights reserved No part may be reprinted in any form without permission.

Monthly Oilheating Trends

OILHEATING INSTALLATIONS for June showed a very significant rise, 37%, over the same month last year. Estimated installations of domestic burners and units were 44,312 compared with 32,394.

For the complete first half of the year, estimated installations are 249,274 and last year our revised estimate was 217,495 for a 15% increase. By types of installations, June showed: New Homes, 16,049; Replacements of old oilburners, 13,851; and Conversions from other fuels, 14,412.

For the full six months we find: New Homes, 85,758 this year and 75,952 last year; Replacements of old oilheating, 93,517 vs. 71,317; Conversions from other fuels, 69,999 this year and 70,226 last year.

Oilheating dealers the first six months of this year sold an estimated 7,712 central airconditioning jobs. They also sold approximately 8,496 oilfired water heaters using mechanical burners.

Oilheating Stocks: Dealer stocks were down at the end of June showing approximately 60,131 domestic oilburners and units compared with 73,159 a month earlier; and with 79,244 on the same date last year.

The current stocks were divided: Separate burners, 30,667; Boiler-burner units, 12,628; and Furnace-burner units, 16,836.

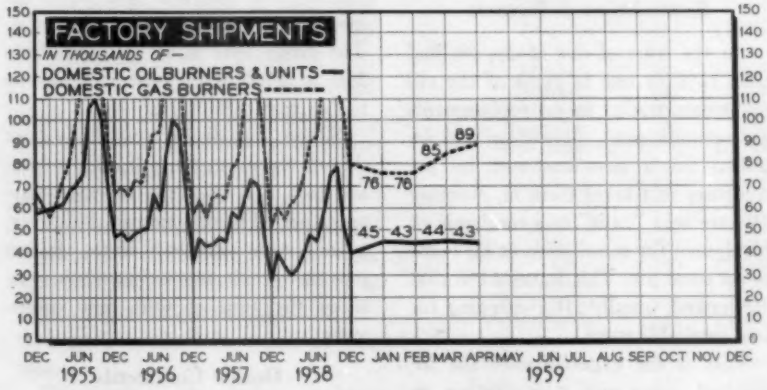
Factory stocks at the end of April were 54,907 domestic burners and units or almost the same as 54,062 a year earlier.

Tank Stocks: At the end of June dealers were holding an estimated 47,728 consumer oil tanks or a very sharp increase from 33,802 a month earlier and compared with 45,076 a year earlier.

By sizes the June 30 tank stocks were divided: 220-275 gal., 44,352; sizes 550-675 gal., 2,041; and sizes 1,000 gal. or larger, 1,335.

The new format

This new style for Merchandising News enables it to be used as a market analysis section for the monthly issues of the magazine. By concentrating these statistical studies in one spot they should be more convenient for the reader with a specific marketing interest.



Shipments of Oilburners and Units
(Including Exports)

Adjusted to include manufacturers other than those reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	APRIL			FOUR MONTHS		
	1959	1958	Percent Change*	1959	1958	Percent Change*
Separate Burners	30,035	20,035	+49.9	126,896	88,538	+43.3
Boiler Burners	3,389	2,421	+40.0	11,225	10,799	+ 3.9
Furnace Units	9,086	10,123	—10.2	39,477	36,944	+ 6.9
All Domestic	42,510	32,579	+30.5	177,598	136,281	+30.3
Commercial	3,278	2,234	+46.7	11,169	9,861	+13.2
Total	45,788	34,813	+31.5	188,767	146,142	+29.2

*The 1959 figures are not directly comparable to 1958 since the Census Bureau has changed its base from which total shipments are estimated by them.

June Minimum Retail Prices: Key Dealers

	June Avg.	May Avg.
Separate Burners	$315	$315
Boiler Burners	733	731
Furnace Burners	613	613

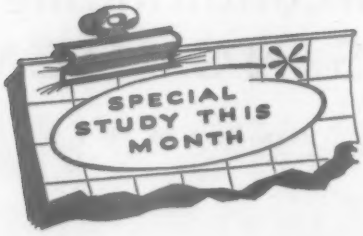
Price Index: Separate Burners 1947-49 is 100%

WHOLESALE

June	95.6	Six months ago	94.6
May	94.6	Year ago	95.3

RETAIL

June	92.2	Six months ago	92.5
May	92.1	Year ago	92.1



What happens to the old Oilburner when it is replaced by a new One?

IN CALCULATING the number of oilburners in use throughout the country, oil industry economists often bring up the point that we should make some allowance for scrappage in situations that are not covered by conventional replacements or losses to other fuels. They have in mind the result of fires, floods, catastrophes, and house abandonment in highway construction.

We have always believed that the re-installation of old oilburners that are traded-in on replacements—and while never officially estimated—would more than offset the losses in the other direction.

This is the first time that we have tried to learn the extent of these re-installations.

Reconditioned Burners

At the start of our study, we find that 12% or one in eight of the old oilburners traded in on replacements are reconditioned, cleaned-up and installed for a new customer by the company that takes them in. Another 7% are sold "as is" to a mechanic or handyman for installation at his home or on some job. This leaves 81% that are junked, usually after stripping for any servicable parts.

That is the experience of the individual companies participating in our study.

We also asked them about what share of old oilburners taken out and replaced, in their opinion, gets back into use with another customer. Here they are estimating the whole experience of their own market and their figure is 15.4%. Thus, conservatively putting together these three percentages we learn that one in six of the old burners taken out for replacements goes back into use.

Last year, total replacements were approximately 174,000 jobs. That indicates that 29,000 old burners taken out went back to providing heat for someone else. This is obviously so far above any uncounted losses through abandonment, that it indicates total operating figures as generally accepted to be on the low side.

We asked the group what they get for an old burner sold to the junk man. The average price is $5.74; the range was from 50¢ to $20.

On the question of who buys the old burner from the dealer to re-install it, the ratio is about one to a mechanic or professional heating dealer to each three sold to a handyman or "do-it-yourselfer."

When the dealer sells the burner "as is" to a man who is going to re-install it, he typically gets $32 for it. The range here is all the way from $20 to $100 with most running no higher than $50.

When the dealer actually reconditions the burner and installs it himself to a new user the average guarantee period is nine months. However, a little more than half of the dealers provide a 12 month guarantee or about the same as with new equipment.

Dealer Comments

Typical of this month's comments from dealers are these:

"People who buy used oilburners instead of new ones are usually not the best type for oil accounts." . . . "The real reason I give a 24-month guarantee with the oil contract is to impress on the buyer the thorough job I did in rebuilding the burner." . . .

"We rebuild burners that can be converted to the Shell head type only—we salvage the others for service parts." . . . "We never resell old burners." . . . "We strip old burners and save motors, pumps, transformers, etc., for parts." . . . "Real estate agents are our largest users of old equipment." . . .

"We usually use the motor for service parts." . . . "The cost of reconditioning an old burner would make it more expensive to us than a new one." . . . "The best thing is to get the old burners out of circulation." . . . "We save the best of our replacements for emergency use in the winter to loan to a customer while his burner is being repaired; this is especially convenient when the breakdown is at night and necessary part not available."

"How could renting a used burner actually be profitable when the greatest cost is labor: installation, tank, wiring; the burner is the small part of it, and new controls usually have to be supplied." . . . "We do not feel that it is good business to resell old or obsolete burners." . . .

Strip old Equipment

"People are reluctant to spend money on heating—hence, when a unit is replaced it invariably falls into the junk category." . . . "We strip old burners, break up housing, rebuild motor, pumps, transformers and controls; we use the better burners for service burners." . . . "If any burner is in fair condition we strip it and have the parts for replacement on contracts, after rebuilding parts." . . .

"We always keep six or so good reconditioned burners on hand for servicemen to install on a job that breaks down badly at night or over a weekend." . . . "We scrap all old burners that we replace; we sometimes save and rebuild pump and/or motor for service only." . . .

"If burner is not too old—rebuilding will give 100% satisfaction." . . . "We just use motor and pumps." . . . "Most burners are no good when we take them out." . . .

"When we replace an old burner, we junk it except for parts that are not obsolete. We repair pumps, motors, transformers, etc. The balance of the burner, casting, controls are smashed with a sledge hammer and

rendered useless. We feel selling a second hand burner is an injustice to our industry and we feel that if we have to replace a burner that it has rendered its service to that customer so why foster its problems and high oil consumption on another.

"The most important thing is that a second hand burner installation is of necessity a cheap one. The resultant service problem and high oil consumption result in a good prospect for gas. Last, but certainly not the least, every burner we junk means some manufacturer sells a new one."

Oilburner Permits*

JUNE 1959		6 MONTHS 1958	1959
2	Albany, N. Y.	13	5
16	Baltimore, Md.	148	127
70	Bridgeport, Conn.	300	278
39	Columbus, O.	8	47
12	Detroit, Mich.	154	183
45	Elizabeth, N. J.	130	144
10	Freeport, N. Y.	60	87
77	Hartford, Conn.	327	429
30	Irvington, N. J.	59	99
44	Meriden, Conn.	153	164
..	Milwaukee, Wis.	224	..
11	Minneapolis, Minn.	91	108
11	Montclair, N. J.	52	44
2	Morristown, N. J.	..	10
21	Mt. Vernon, N. Y.	201	180
..	Newark, N. J.	284	..
38	New Bedford, Mass.	312	247
20	New Haven, Conn.	87	329
12	New Rochelle, N. Y.	53	69
476	Brooklyn-Queens	2,630	2,274
17	Norfolk, Va.	120	123
..	Omaha, Neb.	21	..
5	Orange, N. J.	28	14
9	Passaic, N. J.	27	24
24	Paterson, N. J.	91	94
..	Philadelphia, Pa.**	577	..
33	Portland, Me.	197	212
97	Portland, Ore.	796	478
13	Poughkeepsie, N. Y.	34	47
23	Providence, R. I.	179	177
35	Richmond, Va.	145	185
60	Roanoke, Va	488	299
37	Rochester, N. Y.	232	230
6	Rockville Centre, N. Y.	17	18
..	Salem, Mass.	138	..
..	St. Louis, Mo.	646	..
2	St. Paul, Minn.	29	36
6	Schenectady, N. Y.	16	35
..	Spokane, Wash.	95	..
60	Springfield, Mass.	296	280
13	Stamford, Conn.	70	91
20	Washington, D. C.	174	128
7	White Plains, N. Y.	70	68
4	Wilmington, Del.	89	57
63	Worcester, Mass.	311	358
8	Yonkers, N. Y.	82	70
	Totals	8,089	7,673
	Percent Change		5.2

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

**Courtesy of "Philadelphia Inquirer."

52% of Canadian Homes are heated by Fueloil

OIL'S SHARE of the residential heating market in Canada has been reported in the annual survey by the Dominion Bureau of Statistics. According to the report, 52% of Canadian homes use fueloil as their principal heating fuel.

The survey has been limited to cities and towns of more than 5,000 population. The table below indicates the relative positions of the three fuels:

Principal Heating Fuels in Canadian Residences

	IN THOUSANDS		PERCENT OF TOTAL	
	1957	*1958*	*1957*	*1958*
Oil	2,040	2,173	50.3%	52.0%
Gas	354	506	8.73	12.1
Coal or Coke	948	816	23.3	17.9
Total Households	4,055	4,173	..	..

May construction Contracts show Gain over last year

RESIDENTIAL building contracts in May totaled $1,677,324,000, up 25% over the May 1958 level according to the F. W. Dodge Corp., New York.

Within this category, contracts for single family homes scored the largest increase, 33%. Dwelling units represented were 129,717, a gain of 25% over the same month last year.

The Dodge Index of Construction Contracts, seasonally adjusted, was reported at 259 in May (1947-49 is 100), down somewhat from the all-time peak reached in April of this year.

Nevertheless, the Index in May continued at a level above last year's average with housing as the chief source of strength in the construction picture.

Total construction for the month amounted to $3,541,858,000, an increase of 4% over May of the previous years. Non-residential buildings in May were valued at $1,071,520,000, down 5%; and heavy engineering construction amounted to $793,014,000, down 15%.

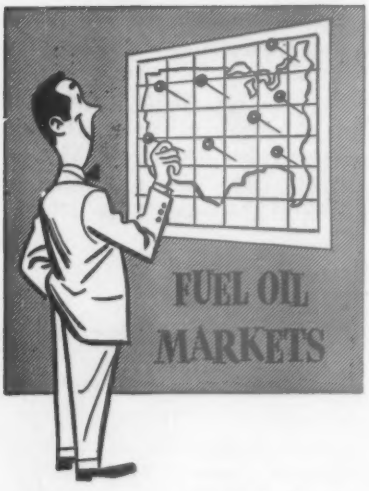
Contracts for the first five months with percentage comparisons with the same period of last year were: residential building, $7,126,054,000, up 39%; non-residential, $4,669,710,000, up 3%; heavy engineering, $3,434,570,000, up 4%; and total construction at $15,230,334,000, up 17%.

Where is the

New home Market?

	No. of Permits Issued	
	April	*4 Mos.*
Alabama	1,552	6,588
Arizona	2,557	9,586
Arkansas	323	1,407
California	22,884	78,949
Colorado	1,129	4,511
Connecticut	1,768	4,925
Delaware	218	480
District of Columbia	138	354
Florida	7,070	27,447
Georgia	2,206	6,824
Idaho	206	616
Illinois	7,331	16,784
Indiana	1,596	4,196
Iowa	1,115	2,413
Kansas	784	3,097
Kentucky	1,155	3,026
Louisiana	1,294	5,530
Maine	149	215
Maryland	3,240	9,273
Massachusetts	2,509	5,294
Michigan	4,300	11,439
Minnesota	2,591	5,179
Mississippi	293	1,205
Missouri	7,886	13,637
Montana	214	535
Nebraska	987	2,208
Nevada	213	1,246
New Hampshire	173	489
New Jersey	3,502	10,369
New Mexico	964	3,490
New York	11,426	35,417
North Carolina	1,272	4,569
North Dakota	311	450
Ohio	6,339	15,089
Oklahoma	991	3,567
Oregon	828	2,646
Pennsylvania	4,881	12,894
Rhode Island	341	790
South Carolina	438	1,649
South Dakota	242	560
Tennessee	1,968	5,587
Texas	7,684	28,610
Utah	857	2,352
Vermont	29	53
Virginia	3,182	8,553
Washington	1,765	7,487
West Virginia	482	1,192
Wisconsin	2,304	5,498
Wyoming	95	389

Greater detail on permits within the individual states is included in a booklet, "New Dwelling Units authorized by local Building Permits," issued monthly by the Bureau of Labor Statistics. U. S. Dept. of Labor, Washington 25, D. C.



THE PRICE TABLE this month shows a steady market in eastern and southern states and some declines in the Midwest. There was a drop of one-half cent gallon in the tank wagon prices of No. 2 Oil at Detroit, Minneapolis, St. Louis, Indianapolis and Des Moines. This might be considered just a delayed adjustment following the Gulf price downtrend of the previous month.

It is unfortunate but inescapable that heating oil prices go down in warm weather and up in cold weather following each year the supply and demand pattern. Some day we may find an answer to that incongruous result from the consumer standpoint, but there certainly is none in sight at the moment.

Notice the new footnote on the price table designed to clear up a West Coast situation where the designation "tank car buyer" does not mean the wholesale price for a fueloil distributor, but rather a commercial consumer.

The stock table shows accumulations at refineries, primary terminals and in transit some 16% above a year ago for the July 17 week. This is particularly pronounced on the East Coast where the stocks were up 23%.

Fortunately the oilburner crop is growing better this year than last so perhaps we can use this uptrend to good advantage next winter.

Distillate Fueloils

PRIMARY STOCKS*
(Thousands of Barrels)
East of Rockies

	July 17 1959	July 18 1958
East Coast	48,444	39,352
Midwest	36,669	37,626
Gulf Coast	28,127	20,252
Total	113,240	97,230

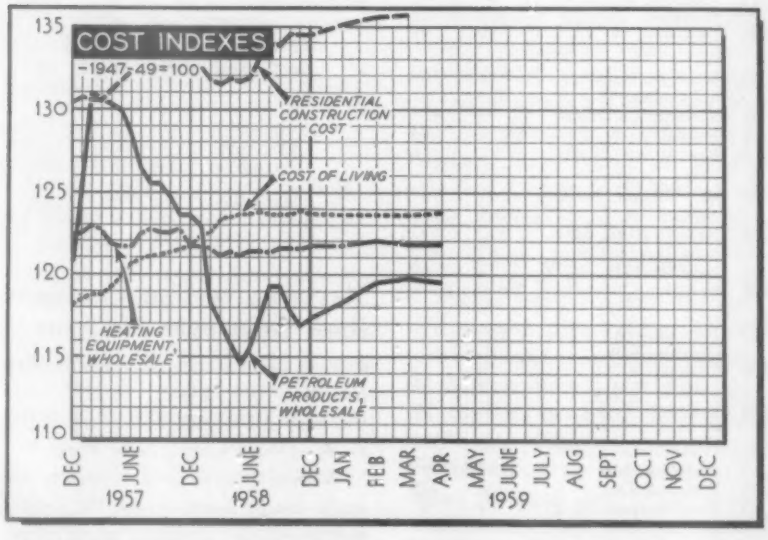
* American Petroleum Institute.

No. 2 Heating Oil (Including No. 3 & PS200)

Price per gallon as of July 10, 1959

	Tank Cart†	Tank Wagon		Tank Cart†	Tank Wagon
Portland, Me.	10.3(A)	14.9	Charleston, S. C.	10.4(A)	13.6
Boston	10.2(A)	14.7	Chicago	10.00*	14.1
Providence	10.2(A)	14.4	Detroit	10.75*	15.1
Hartford	10.45(A)	14.5	Cleveland	11.6*	15.6
New Haven	10.1(A)	14.6	Minneapolis	10.179	14.2
Syracuse	11.3(B)	14.9	St. Louis	10.5*	14.9
Albany	10.3(A)	14.3	Indianapolis	10.39*	14.9
New York	10.1(A)	14.0	Milwaukee	10.75*	14.9
Newark	10.1(A)	14.1	Des Moines	10.55	14.7
Philadelphia	10.1(A)	14.2	San Francisco	12.05*	14.8
Baltimore	10.1(A)	14.4	Portland, Ore.	12.10*	15.1
Wilmington, N. C.	10.4(A)	14.0	Seattle	12.20*	15.2
Washington	10.4(A)	14.7	Spokane	13.80*	16.8
Richmond	10.5(A)	14.1	Los Angeles	11.55*	14.3

Tank wagon prices shown are for maximum one-time delivery discounts.
*Delivered.
(A) Price subject to .50¢ voluntary summer discount.
(B) Price subject to .40¢ voluntary summer discount.
†Tank car prices are typically those paid by fueloil distributors as a purchase price. On the West coast, this term more often indicates a retail sale to a large commercial account. This is often a half cent below tank wagon price.



Continental Oil announces Purchase of Coastal Oil

CONTINENTAL OIL CO. has purchased the Coastal Oil Co., Newark, N. J.

The move provides Continental with a key marketing position in the nation's largest fueloil consuming area. Coastal gains the backing of the resources of a major petroleum company.

Coastal is continuing to operate with the same management and organization and its programs of dealer assistance will be expanded. Both Coastal and Continental have affirmed the policy of marketing through independent fueloil companies.

Furnace with Windows built by Esso to study oil Flame

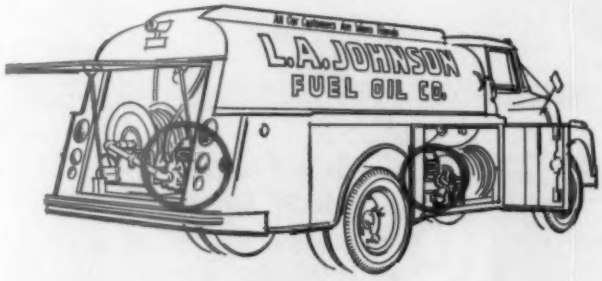
AN EXPERIMENTAL furnace with 21 quartz windows has been designed and built by Esso Research and Engineering Co., Linden, N. J. The furnace allows researchers to observe the burner flame from all directions.

Besides giving a picture of the oil flame, the windows make it possible to probe every spot in the firebox. The quartz windows are one-eighth inch thick and allow complete visibility within the combustion chamber where the temperature is more than 2000 degrees.

Seven years, millions of retail gallons...

"never a truck meter out of service!"

Florida fuel oil dealer cites unfailing performance of A. O. Smith meters, credits them with helping serve 38% more customers per day with resultant cuts in cost per gallon delivered.



Johnson's home delivery fuel truck features dual meters — one for a line feeding out of the right side, one in rear for a left side line. Drivers can make deliveries from either side of the truck without turning around, backing up or entering driveways. Seventeen of the Company's trucks are equipped with dual meters.

Mr. L. A. Johnson of the L. A. Johnson Fuel Company, Orlando, Fla., says, "Millions of retail gallons have been accurately measured by our Smith meters and we have never had one truck out of service due to a meter break-down!"

Mr. Johnson also lauds the way A. O. Smith worked with his organization to come up with a twin metering system on their trucks (see diagram). "After 7 years' operation," he adds, "we've upped gallonage per truck ... cut delivery cost per gallon ... serve 38% more customers daily ... and reduced accident losses by 52%! Our dual service equipment has made single meter trucks as old fashioned as the horse-drawn oil truck!"

This case is typical of the way A. O. Smith works with its customers to develop ways and means to solve specific problems. Contact your representative or write direct.

Through research ... a better way

A.O.Smith
CORPORATION

Smith-Erie Division

Factories: 5715 Smithway St., Los Angeles 22, Calif.; Erie, Pa.
Offices: Atlanta 5, Ga.; Chicago 3, Ill.; Houston 2, Texas; Los Angeles 22, Calif.; New York 17, N. Y. Oakland 21, Calif.; Tulsa, Okla. Canada: Toronto 12, Vancouver 1.
A. O. Smith INTERNATIONAL S. A., Milwaukee 1, Wisconsin, U. S. A.

CLEAN UP WITH GOOD TOOLS —GET 'EM AT SID HARVEY'S

ILLUSTRATION SHOWS HARVEY DE-LUXE MODEL

HARVEY FURNACE VACUUM CLEANER

The cleaner with plenty of horsepower to give you the suction you need. With two inside dust bags to give you better filtering action and positive protection against costly blow-outs.

COMPLETE WITH ATTACHMENTS	
Harvey Jr.	$ 99.50
Harvey De-Luxe	111.65

Attachments and Spare Parts For other cleaners including Doyle, GE, Kent, Nu-Vac, Premier, Pullman, Super-Suction and Tornado. Listed in detail in Sid Harvey's catalog.

FURNACE AND DUCT BRUSHES

Nothing gets stubborn soot and scale like the proper brush, Sid Harvey's has a wide choice to choose from. Fine Wire-Hard Wire-Fibre.

GET CLEAN-UP TIME

A complete listing of essential tools and supplies needed for CLEAN-UP. Write for your copy . . . It's FREE to the trade

SOOT GUNS AND SOOT DESTROYERS

Get the places that brushes and vacuum cleaners can't reach. Sid Harvey's soot destroyer is safe, fast, economical and easy to use.

AVAILABLE AT ALL SID HARVEY STORES

SID HARVEY INC.
VALLEY STREAM, NEW YORK

Petroleum Products for Profit is Theme of Maine Convention

DELIVERING heating oil for profit was the topic discussed by five speakers at the fifth annual convention of the Maine Oil & Heating Equipment Dealers' Association at Poland Spring, Me., June 26.

Serving on the panel were Kenneth R. Gifford, Lawrence Burke, Robert F. Staley, E. Thomas Hacker and Wendell B. Trip. Another group discussed "Credit—the Key to Profits"; participating were William Foley, Joseph Cummings, Harland B. Bruns, Harry H. Fowles and David W. Fuller.

Among the speakers at the convention were Halsey Smith, president, Casco Bank and Trust Co., Portland; Robert Gray, FUELOIL & OIL HEAT; and Dr. Lloyd Elliot, president, University of Maine.

Kenneth R. Gifford, Augusta, was elected president succeeding Edward P. Hacker, Portland, who will be a member of the advisory council and will serve on the board of directors. Other officers are Charles L. Hamm, Bangor, first vice-president; Richard A. Morrell, Brunswick, second vice-president; Leland O. Ludwig, Jr., Houlton, secretary; John P. Cullinan, South Paris, treasurer; and Donald H. McGovern, Portland, executive secretary.

Directors elected for a three year term were Byron G. Pride, Westbrook; E. Thomas Hacker and M. Herrick Randall, Portland; Vincent C. Peters, Fairfield; and C. K. Clauson, Winslow.

The Association has prepared its second survey on heating oil delivery and has come up with the following averages based on 67 trucks: truck capacity, 1,545 gal.; 3,400 gallons delivered in an eight hour day; estimated cost per mile .19.

The dealers cooperating in this

KEEPS A TIGHT GRIP ON THE PROFIT END OF YOUR HOSE!

SAVES TIME! SAVES OVERHEAD! SAVES MONEY!

More profit for Fuel Oil Dealers with the new Johnson Fil-Quik System! Locks tight! Fills Quick! Saves dollars!

Takes a big cut out of overhead by reducing labor and trucking costs, by economizing on equipment, by saving hours of time every day.

Made by the manufacturers of internationally famous Johnson Fuel Demand Meters, FIL-QUIK is the new, dependable, simple, safe and profitable way to fill fuel oil tanks QUICKER!

Mail coupon below for free booklet "The Fil-Quik way to more profits in Fuel Oil".

"THE FIL-QUIK WAY TO MORE PROFITS IN FUEL OIL"

SEND FOR FREE BOOKLET TODAY!

Johnson

DIVISION OF OAKLEY and OLDFIELD
Home Heating Specialists for over 50 Years
329 S. Pitcher St., Kalamazoo, Michigan

JOHNSON FIL-QUIK DIVISION
DEPT. H-8
329 S. PITCHER ST.
KALAMAZOO, MICH.

Gentlemen:

Please send copy of "THE FIL-QUIK WAY to More Profits in Fuel Oil" to:

COMPANY _____

STREET ADDRESS _____

CITY AND STATE _____

ATTENTION OF _____

MAIL THIS COUPON TODAY
FOR FREE BOOKLET "THE FIL-QUIK WAY TO MORE PROFITS IN FUEL OIL"

Webster Booster pumps supply one or more overhead furnaces not to exceed combined firing rate of: Type 2R131-15 GPH.
2R233-30 GPH.

assured!

oil aplenty
15 feet above the tank . . .
35 feet above the pump!

WEBSTER *Booster* PUMPS

There's one sure way to provide an adequate supply of fuel oil for one or more overhead furnaces . . . install a Webster Booster pump! Developed to meet high lift requirements, these big capacity, *dependable* Websters lift oil 15 feet from a storage tank and discharge it 35 feet or more *above* the pump! Assures an ample oil supply at all times.

Webster Booster pumps are available in 15 and 30 GPH sizes. Both can be used as continuous or intermittent duty transfer pumps for filling small overhead feeder tanks or for other transfer purposes. More, Websters are kitten-quiet — no hum or vibration. And, they're equipped with the exclusive rotary filter that eliminates wire mesh strainers, ends cleaning problems forever.

WRITE FOR BULLETIN FU3-1 for complete specifications and installation data.

HEATING DIVISION
WEBSTER ELECTRIC
RACINE · WIS
our 50th year

study show the following characteristics: 71% operate bulkplants with an average 142,000 gal. storage. Three fourths of them have their own gas pump; 30% do truck repairs; on the average the trucks are painted each 2½ years; the chassis kept five years and the tank 12 years.

Another study on fleet operation showed larger trucks averaging 1,800 gals., delivering 4,835 gals. in an eight hour day and making 25.9 drops. The trucks averaged 54.1 miles per day, had a pumping speed of 48.9 gpm. The 41 dealers said their average drop was 179 gallons and that in their opinion the ideal truck size was 2,000 gals.

Oregon Oil Heat Institute names Loucks as President

ALFRED W. LOUCKS, Home Fuel Co., Salem, was elected president of the Oil Heat Institute of Oregon at the annual convention in Salem, June 19.

The retiring president, Scott Partridge, Portland, was named chairman of the board of directors. Other officers are: Robert Inman, Vancouver, vice-president; James C. Coon, Portland, treasurer; and Joseph B. Young, Hood River. New members of the board of directors are Roy Rockwell, Portland; James Cahill, Coos Bay; Kenneth Goodall, Jr., Portland; and Bud Brown, Klamath Falls. Besides Partridge, Inman, Coon and Young, holdover directors include Jack Bosse, Eugene; Walter Anderson, Portland; Emory Dye, Hillsboro; and Frank Davies, Vancouver.

The Institute has moved its offices to 433 N.E. 22nd Avenue, Portland.

Southeastern Wisconsin OHI has Party at Country Club

MEMBERS of the Southeastern Wisconsin Oil-Heat Institute had their golf party August 4 at the Tuckaway Country Club. Serving on the golf committee were Elmer Kaul, chairman; Harold Radtke, Harold Eisen and Harold Theisen.

The group had its June meeting at the Milwaukee Elks Club. Reports from the advertising and legislative committees were presented.

SATISFACTION *builds business* . . . satisfied users pleased with excellent, trouble-free performance . . . satisfied dealers profitably rewarded from installations of top-performing equipment . . . satisfied wholesalers gratified by a rapid turnover of competitive products that are built better and priced right.

And Moncrief is *the line* of Furnaces and Air Conditioners, designed, constructed and priced for complete satisfaction!

To transfer these advantages to your customers, and your business, will cost you nothing . . . can make you plenty of money!

You pay no premium for the superior design and sturdier construction resulting from Moncrief's more than 60 years of manufacturing experience. Moncrief leads with competitive pricing, because Moncrief has stepped ahead with manufacturing advancements that produce substantial savings in cost!

If you want the extra profits available from creating really satisfied customers, call your Moncrief Wholesaler, *now*. He makes it possible to . . .

Build Today for a More Profitable Tomorrow

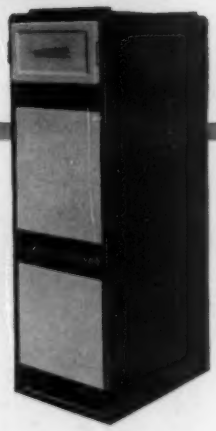
WITH

MONCRIEF

Factory Assembled and Wired Upflow Winter Air Conditioners — compact in Design, Substantial in Construction — for Basement, Closet or Utility Room Installation — Approved for Close Clearances — Adaptable for Cooling — Gas and Oil Fired Complete Line!

Basement Type Winter Air Conditioners — Attractive Console Cabinets — Designed to Burn either Gas or Oil — Available in Assembled and Wired Oil Models!

Horizontal Furnaces — Low and Compact for Limited-Space Installations — Complete Line of Gas and Oil Fired Models!



Counterflow Winter Air Conditioners — Heavily Constructed, Compactly Designed — Approved for Close Clearances — Gas Fired and Oil Fired!

Underwriters' Listed Air Cooled Condensing Units — 2, 3 or 5 H.P. Capacities

Winter Air Conditioner — Upflow Type, with Plenum Evaporator Coil

Winter Air Conditioner — Basement Type, with Plenum Evaporator Coil

Winter Air Conditioner — Counterflow Type, with Counterflow Evaporator Coil

Horizontal Furnace — with Duct Type Evaporator Coil

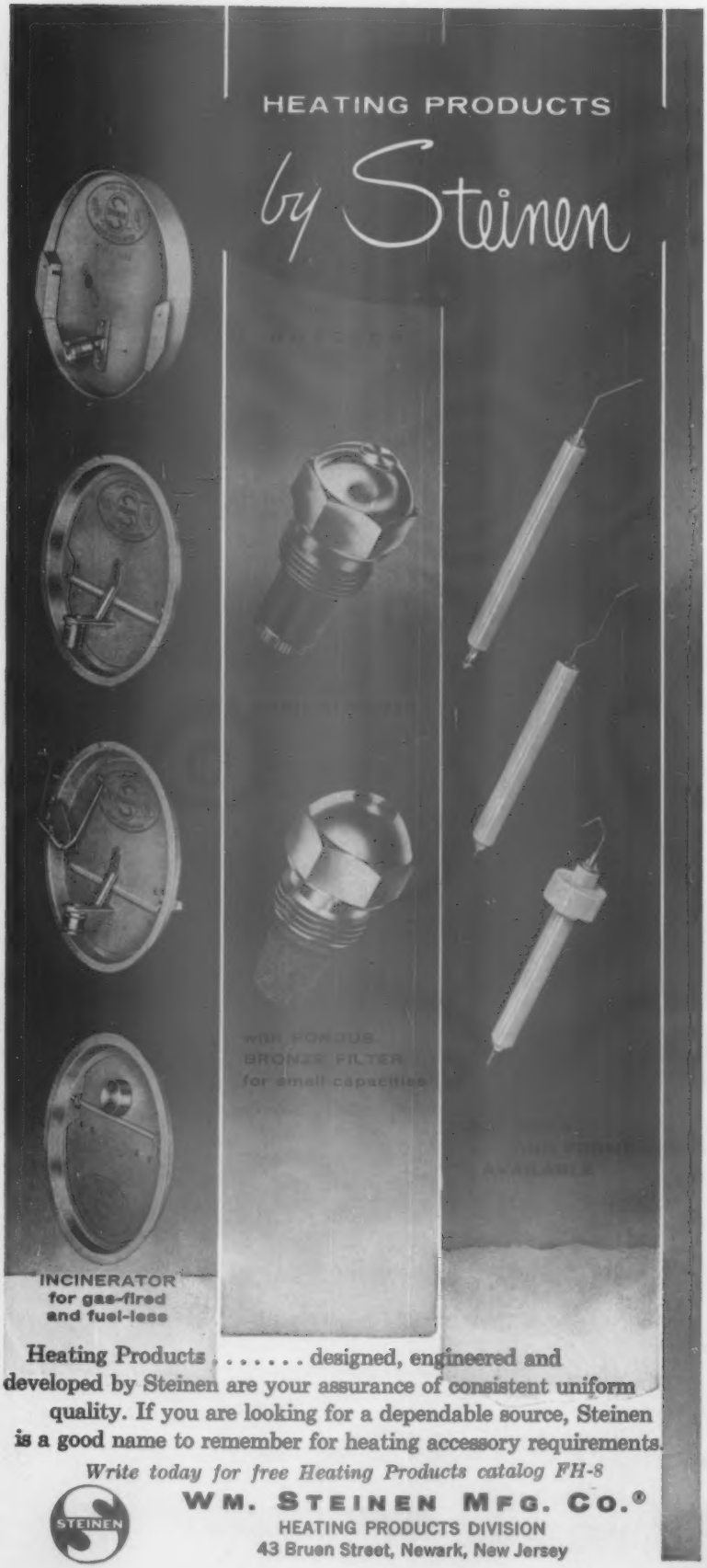
Blower-Coil Unit — Compact Air Handling Combination

Gas Unit Heater — 5 Models

Conversion Gas Burner

THE HENRY FURNACE COMPANY • *Medina, Ohio*

HEATING AND AIR CONDITIONING UNITS — MONCRIEF SINCE 1895 — FURNACE PIPE AND FITTINGS


HEATING PRODUCTS
by Steinen
INCINERATOR
for gas-fired
and fuel-less
Heating Products . . . . . designed, engineered and developed by Steinen are your assurance of consistent uniform quality. If you are looking for a dependable source, Steinen is a good name to remember for heating accessory requirements.
Write today for free Heating Products catalog FH-8
WM. STEINEN MFG. CO.®
HEATING PRODUCTS DIVISION
43 Bruen Street, Newark, New Jersey

Exam for Servicemen prepared by OHI's education Committee

AN EXAMINATION to qualify oilheating servicemen has been prepared by the Domestic Education Committee, Oil-Heat Institute of America, New York. The examinations are being made available for use throughout the industry by the Distribution Division.

Robert W. Hundley, Wm. Steinen Mfg. Co., Newark, N. J., was chairman of the committee preparing the test.

Local OHI chapters can arrange for certification examinations to be held in their areas providing a minimum of 40 men wish to take the examination. Registration fee is $2 per serviceman. This fee must be paid in advance since a check covering the number of servicemen wishing to be certified must accompany the local chapter's application to OHI for a certification examination.

These tests should be held in a local school with a faculty member acting as proctor. Proctor will receive $20 from OHI and their duties include a preliminary grading of the examinations. Final grading is done by Oil Heat Institute.

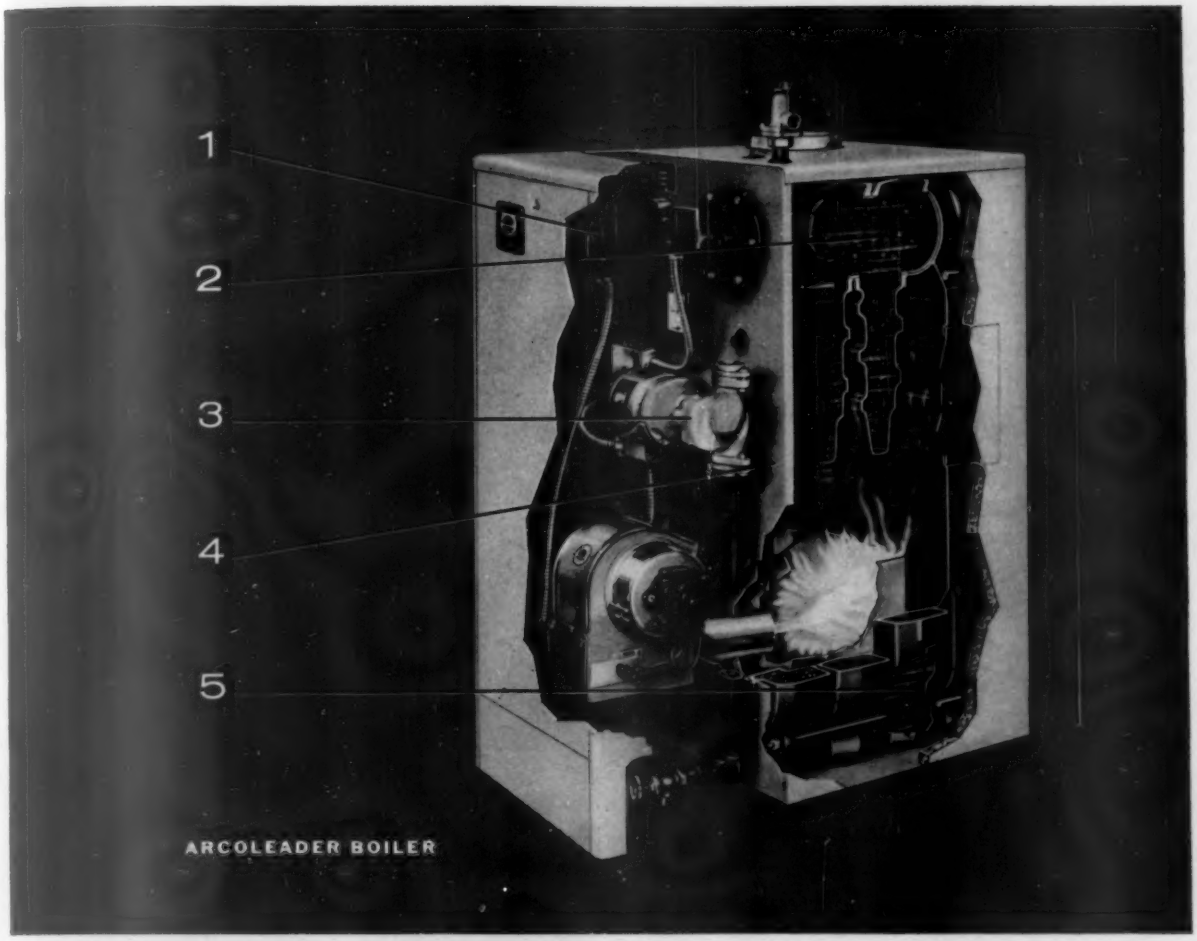
Servicemen receiving grades of 80% or better receive certification in the form of a card and pin stating that they are OHI of America Certified Oilheating Technicians. Decalcomanias are available to dealers stating that their servicemen have been tested and found qualified.

There are two certifications: The silver indicates that the serviceman has satisfied the requirements for work on high pressure gun type burners. The gold qualifies the man for service work on low pressure and rotary burners as well as the high pressure type.

Philadelphia Fuel Conference has Picnic as final Meeting

A PICNIC and clam bake was held June 25 by the Greater Philadelphia Fuel Conference as its last meeting of the season.

Bob Conlon and Jack Malehorn were in charge of the games during the outing held at the Rose Tree Hunt Club, Media, Pa.



Here are five reasons why American-Standard time-saving, packaged boilers will help you

HANDLE MORE HEATING JOBS

These five time-saving features of the American-Standard packaged Arcoleader will enable you to meet the big demand for boiler replacements and get a larger share of this highly profitable business.

You save labor time because the packaged Arcoleader boiler arrives fully factory-assembled with (1) all controls mounted and pre-wired for immediate connection; (2) a large-capacity, tankless I-W-H rated water heater factory-installed (optional); (3) the circulator factory-mounted.

You save because the Arcoleader oil boiler has (4) all controls, plus the supply and return connections mounted on the front, and (5) wet base construction for installation anywhere without specially built platform or flooring protection.

You make more money with American-Standard packaged boilers because speedy-installation features allow you to handle more jobs during the peak replacement season . . . no need to postpone or refuse installations.

Ask your American-Standard distributor about the Arcoleader, with net I-B-R water ratings of 75,000-129,800 Btu/Hr, or write AMERICAN-STANDARD, PLUMBING AND HEATING DIVISION, 40 West 40th Street, New York 18, New York.

AMERICAN-Standard and Standard® are trademarks of American Radiator & Standard Sanitary Corporation

AMERICAN-Standard
PLUMBING AND HEATING DIVISION

fueloil & oilheat

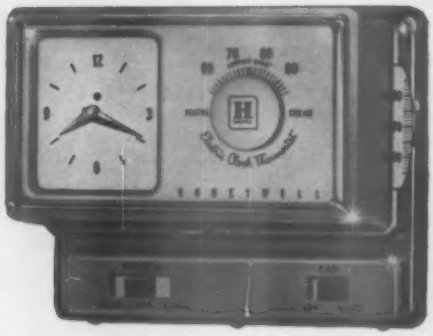
CHO

T87 Heating-Cooling Thermostat

Standard residential air conditioning thermostat for semi-automatic changeover. 12 matching Q405 sub-bases provide the most flexible control combinations available. Features the popular decorator cover, and the many engineering advantages of the world famous Honeywell Round. Dust-free mercury switch. Anticipation on both heating and cooling.

T870 Heating-Cooling Thermostat

This new deluxe heating-cooling series permits semi-automatic or full-automatic changeover. Six models, seven sub-bases give up to 42 combinations for every type of heating and cooling—single- or two-stage. Switching for remotely resetting compressor overloads and pressure controls available. Anticipation in all stages of heating and cooling. Easy installation. Dust-free mercury switches. Handsome styling.



T861 Heating-Cooling Clock Thermostat

Automatically controls heating and air-conditioning. When controlling heating, lowers temperature at night for cool, economical sleeping, raises it in the morning. For cooling, can either raise or lower the temperature at night, return to daytime temperature in the morning. Or, the same daytime temperature can be maintained 24 hours. Your customers may easily choose the exact control method to suit their preference.

ICE

CHOICE profits are yours with a choice of Honeywell controls for every heating-cooling need

Your choice of Honeywell controls is sure to please your customers—and fatten your wallet! And here's another plus profit idea for you . . . install one of these complete heating-cooling thermostats with sub-base on "heating only" installations*. It creates more add-on cooling business for you by constantly reminding the homeowner that he can easily add cooling. You profit many ways by handling Honeywell's complete line of controls. You have easier installation, simplified inventories, a training school for your crew—*plus* really fast help when you need it. Honeywell backs up its products with prompt, efficient, nationwide service, instantly available from 112 Honeywell sales-service offices. There's one near you, just a phone call away.

Specify Honeywell the next time you order thermostats, heating or air conditioning equipment.

*Idea: Hang one of these FREE cards on each thermostat installation! It quickly explains to your customers the advantages of having a heating-cooling thermostat on their "heating-only" installation. Creates add-on cooling business for you. Get 10, 20 or 50 free cards by writing Minneapolis-Honeywell, Dept. FH-8-85, Minneapolis 8, Minn.

Honeywell

First in Control

fueloil & oilheat

New England OHI celebrates 15 Years of service Schools

AN ALL-NEW service school program beginning September 14 will mark the 15th year that the Oil Heat Institute of New England has sponsored service schools for oilheating mechanics.

This year's curriculum includes combustion and combustion testing by Waltham Oil Burner Co.; servicing rotary burners by Toridheet; low pressure burners by Winkler; fuel pumps by Sundstrand; furnace units; boiler-burner package units by American Standard; controls by General Controls Co.; concluding with safety controls by McDonnell & Miller, Inc.

Three series of schools covering 15 cities will be given. The first course starting in September will be given in Fitchburg, Mass.; Augusta, Me.; Portland, Me.; Lawrence, Mass., and Manchester, N. H.

In January, the course will be given in Quincy, Mass.; Norwich, Conn.; Fall River, Mass.; Providence, R. I.; and Natick, Mass. The final school will include the cities of Salem, Mass.; Springfield, Mass; Hartford, Conn.; Bridgeport, Conn.; and Arlington, Mass.

Additional information about the schools can ge gotten from Hollis L. Farrow, director of education, Oil Heat Institute of New England, 839 Beacon St., Boston 15, Mass.

Robert G. Elmslie, left, managing director, Oil Heat Institute of Washington, Seattle, accepts the distinguished Bronze Award of Outdoor Advertising, Inc., from Benjamin Cuny. The award was made for an outdoor poster, "Clean as oil heat," showing these words in a clean blue on the background of a white sheet. Giant, wooden facsimiles of clothespins were used over the top of the board.

the nozzle in THE GREEN BOX *is taking the industry by storm*

It's the Delavan Type "W"

Takes the guesswork out of nozzle selection

Dealers everywhere are stocking and installing more and more Delavan Type "W" Nozzles. No need to worry about hollow or solid cone in the small burners (.50 through 1.35 GPH) where performance is most critical. You replace either pattern with the Delavan Type "W". The industry's only all purpose nozzle . . . and remember, Type "W" Nozzles under 1.00 GPH are now furnished with sintered filters at no extra cost.

Improved fires on most jobs

Delavan's exclusive bi-metal construction is another reason for its amazing popularity. Brass body and stainless steel metering parts conduct heat away from the nozzle faster after burner shutdown, reduce clogging varnish and residue build-ups.

Be sure you install the premium nozzle —Delavan Type "W" Nozzles in the green box. Try an assortment today.

DELAVAN *Manufacturing Company*

WEST DES MOINES, IOWA

From the world's largest nozzle manufacturer

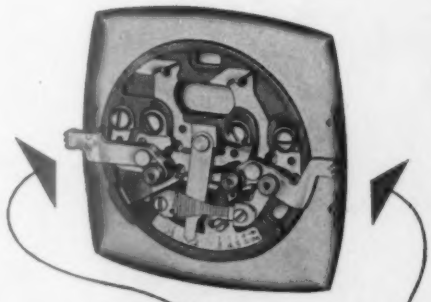
Canadian Representative: Ontor Limited, 12 Leonyn Road, P. O. Box 600, Station L, Toronto 10, Ontario, Canada

PENN "RIMSET"
handles 12 different heating and cooling jobs.

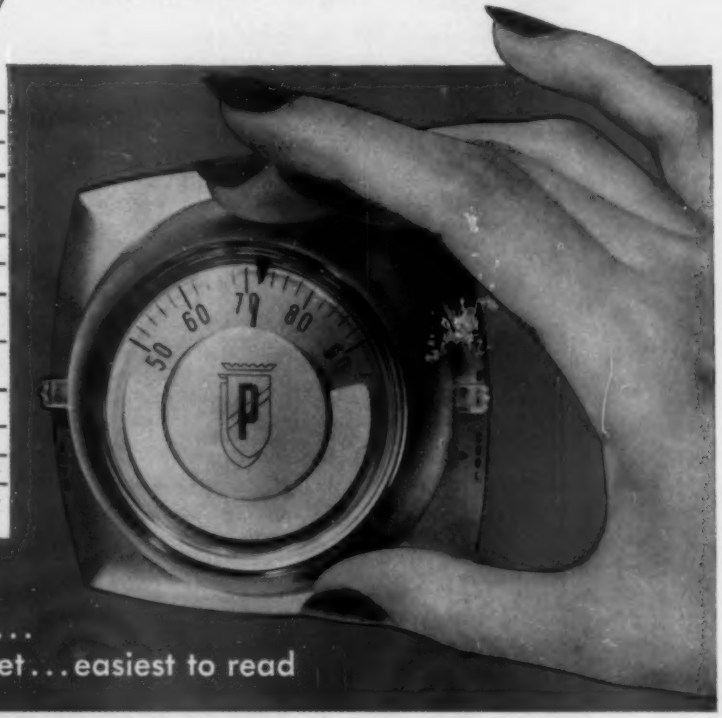
Why carry a large inventory of room thermostats when ONE unit . . . the Penn "RIMSET" . . . will control *any* heating-cooling function desired? You just stock variables of the subbase . . . the same thermostat simply plugs onto any one of these subbases!

And, here's another extra . . . the Penn "RIMSET" is today's easiest-to-set, easiest-to-read thermostat. When setting temperature, simply **dial the rim . . . the extra large dial face remains stationary!** Once you use this better thermostat, you'll want it on all of your heating and cooling installations.

Try Penn on your next job!



APPLICATION	FAN SELECTOR SWITCH	SYSTEM SELECTOR SWITCH
HEATING ONLY	—	—
	—	AUTO-OFF
COOLING ONLY	—	—
	—	AUTO-OFF
	AUTO-ON	AUTO-OFF
	AUTO-ON	—
COOLING — with system interlock for separate heating thermostat	—	HEAT-OFF-COOL
	AUTO-ON	HEAT-OFF-COOL
COMBINATION Heating-Cooling	—	HEAT-COOL
	AUTO-ON	HEAT-COOL
	—	HEAT-OFF-COOL
	AUTO-ON	HEAT-OFF-COOL



just dial the rim . . .
easiest to set . . . easiest to read

PENN CONTROLS, INC. Goshen, Indiana

EXPORT DIVISION: 27 E. 38th ST., NEW YORK, N.Y.

AUTOMATIC CONTROLS FOR HEATING, REFRIGERATION, AIR CONDITIONING, APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

fuel oil & oil heat

THIS NEW LOW-COST FUEL USE COMPUTER

**cuts your oil delivery costs—
eliminates degree day calculating**

There's no complicated calculating needed with the new low-cost *direct-reading* Fuel Use Computer. You're able to tell at a glance the amount of fuel consumed each day by your customers—able to schedule your deliveries to get more profitable use out of your trucks.

How does the Fuel Use Computer work? The rugged, easily installed roof-top measuring unit *continuously* relays the weather around you right to the compact recording unit on your desk. All you do is glance at the direct reading dials for the average fuel use at any time. The recorded "weather units" are displayed on four easy to read registers which indicate fuel oil use for customers who combine house and hot water heating as well as for those who heat house only. What could be simpler?

Just Check These Cost-Cutting Features

- Far Less Clerical Work—And You Use Your Present Card System
- No More Run-Outs—More Use Out of Your Trucks
- Easy to Read—You read "weather units" right off the dials
- Simple to Install—And Maintenance-free
- Safe—low voltage roof units

For more information on how you can cut your oil delivery costs with the new Fuel Use Computer, write today. 1996

HRB SINGER **HRB-SINGER, INC.**

90 Schureman Street New Brunswick, New Jersey

A Subsidiary of The Singer Manufacturing Company

Cross new executive Secretary of American Engineers Society

ROBERT C. CROSS has been appointed executive secretary of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, New York, according to an announcement by Arthur J. Hess, president.

He will succeed Aubry V. Hutchinson who becomes executive secretary emeritus. Cross was former executive secretary of the American Society of Refrigerating Engineers, now merged with ASHAE.

"Hutchinson has served the other predecessor group, American Society of Heating and Air-Conditioning Engineers, as secretary and manager of publications with loyalty and devotion over a period of more than 37 years," said Hess. "As executive Secretary Emeritus, he will, in a consulting capacity, bring his long experience to the challenging problems facing our newly-merged organization."

Chicago fueloil Associations have joint annual golf Party

TWO ASSOCIATIONS, the Chicago Oil Burner Association and the Burning Oil Distributors Association, got together for their annual golf party at St. Andrews Country Club.

Planning the event were Chuck Staley and Gordon Bennett, co-chairman; Jack Bigane, Chester Bieschke, Lory Sullivan and Regis Plante.

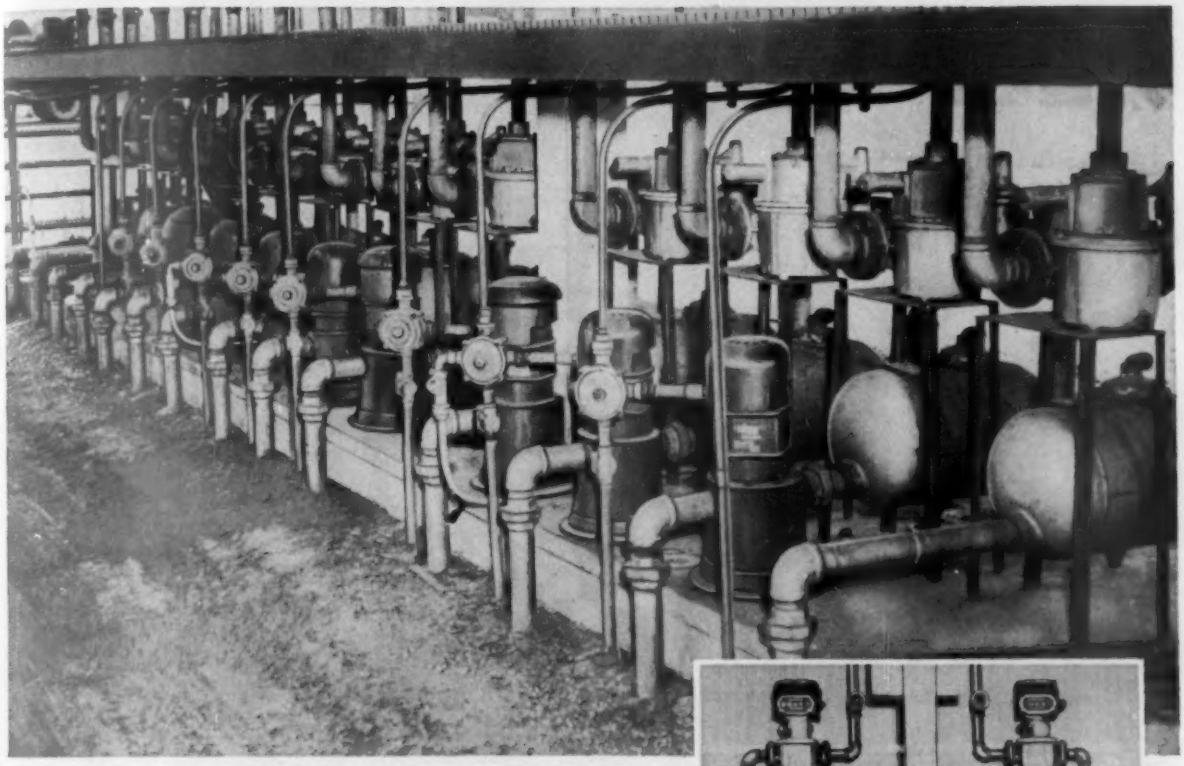
Burkhardt speaks at Meeting of Delaware Valley Dealers

A REPORT on retail fueloil activity in Europe was presented by Charles Burkhardt, national secretary, Distribution Division, Oil-Heat Institute of America, at the June meeting of the Delaware Valley Fuel Oil Dealers Association.

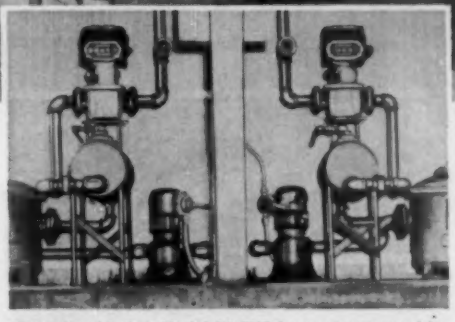
Following his talk, Burkhardt introduced Robert Myers, Mahool Advertising, Inc., Baltimore, who showed releases and envelope stuffers prepared by his firm for the national association.

Bob Kenderdine, president, has appointed Al Woosnam, advertising chairman, to represent the group in dealings with the National Fueloil Council; Hank Palmer is the alternate.

FOUR YEARS OF SERVICE-FREE PUMPING WITH MARLOW® VERTICAL SELF-PRIMERS!



8 Marlow vertical self-priming centrifugal pumps on this large loading rack handle aromatic and aliphatic solvents.



These two Marlow Model 20 EVP-9 pumps are used to pump #1 and #2 fuel oil from four 15,000 gallon above-ground storage tanks.

MARLOWS® Handle Variety of Products Safely and Efficiently

At this large Midwest oil company, 14 different industrial "problem" products are loaded and unloaded. Included in these are fuel oil, toluol, methanol, hexane, carbon tetrachloride, trichloroethylene and eight other aromatic and aliphatic solvents. A total of 16 Marlow vertical, self-priming centrifugal pumps, equipped with explosion-proof motors, are used for drum and tank truck filling. The compact, economical pumps operate from both underground and above-ground storage tanks at capacities of 100 GPM. The vapor handling ability of Marlow self-primers makes possible the efficient transfer of the highly volatile petroleum products handled by the firm.

This is just one of hundreds of oil company installations where Marlow pumps are performing well while exposed to all kinds of weather conditions. Marlow has a complete line of self-priming pumps for bulk plants, home delivery trucks and transports. For complete information, write today for Bulletin PM-06 and the name of your Marlow dealer.

Marlow PUMPS®

MARLOW PUMPS®

DIVISION OF BELL & GOSSETT CO.

Midland Park, New Jersey

Morton Grove, Illinois — Longview, Texas

8-380

The Dynamic New WILLIAMSON

Hi-Boy Model

Companion Cooling Unit

Lo-Boy Model with Air Conditioning

Counter-Flow Model

GASAVER AND OILSAVER UNITS

• Patented two-stage fuel input • Outdoor and indoor thermostats • 20 year Guaranty . . . Gas or Oil

DELUXE AND SUPER SERIES UNITS

• AGA Seal of approval on gas units • 20 year guaranty . . . Gas or Oil • Hi-Boy, Lo-Boy and Counter-Flow styles

NEW SPECIAL SERIES UNITS

• Factory assembled and wired • Factory tested for perfect operation • 10 year guaranty • Interchangeable for use with gas or oil • Hi-Boy, Lo-Boy and Counter-Flow styles

AIR CONDITIONING UNITS

2, 2½, 3, 4, 5, 7½, 10 H.P. units • Duct Coil, Plenum "A" Coil, Horizontal Fan Coil and Console styles • Air cooled • 5 year warranty

NEW AIR CONDITIONING UNITS

"Condaire" self-contained and "Companion" styles

COMPLETE LINE OF SEAL-TITE DUCT, PIPE & FITTINGS for heating and cooling air distribution

CONSUMER PROMOTION

Most complete and aggressive consumer promotion program in the industry . . . sales aids, radio, TV and newspaper advertising, and a complete assortment of free literature on all products.

the fast-moving line that assures dealer profits

CONDAIRE
Self-Contained Cooling Unit

*Seal-Tite** Line Offers You Everything!

*Seal-Tite** is an exclusive **WILLIAMSON** design which insures a dust tight cabinet and outmodes everything but low-cost comfort and cleanliness to the homeowner. Years ahead in eye appeal and decorator designed to blend into any color scheme.

*TM

THE WILLIAMSON COMPANY
3312-0-8 Madison Road • Cincinnati 9, Ohio

Gentlemen:

Please send me information on the following:

☐ Heating Equipment ☐ Cooling Equipment

☐ Duct, Pipe and Fittings

Name_____ Title_____

Firm_____

Address_____

City_____ Zone____ State_____

Rig Your Reels With "LONG-LIFE"

Speed-up Deliveries ...Reduce Your Hose Replacement Costs!

MOLDED AND BRAIDED

BROWN "SYNPLASTIC"® COVER

"LONG-LIFE" FUEL OIL HOSE is built to assure quicker, lower-cost deliveries and *additional* savings through longer service before replacement. *Complements new tight-fill systems.*

Light weight and extremely flexible—easier to carry out and re-reel—more stops per truck per day—more oil delivered—less work for the driver. Tough, wear-and-weather-resistant "Synplastic"® cover. Sizes 1", 1¼", 1⅜", 1½", in maximum lengths of 175 feet.

Mail Coupon for Complete Information

Goodall Rubber Company Date_____
Whitehead Rd., Trenton 4, N. J.

☐ Send Catalog and Prices of "LONG-LIFE" Fuel Oil Hose.
☐ Have Representative call from nearest Branch.

Company_____
Address_____
City_____ Zone_____ State_____

"If it's GOODALL, it MUST be Good!"

Standard of Quality—Since 1870

HOSE • BELTING • FOOTWEAR • CLOTHING AND OTHER INDUSTRIAL RUBBER PRODUCTS

GOODALL *Rubber Company*

GENERAL OFFICES, MILLS and EXPORT DIVISION, TRENTON, N. J.
BRANCHES AND DISTRIBUTORS THROUGHOUT THE UNITED STATES.
IN CANADA: GOODALL RUBBER CO. OF CANADA LTD., TORONTO.

Fuel Merchants Association plans mobile service School

SIX KEY LOCATIONS in New Jersey will be visited by a traveling oilburner service school under the sponsorship of the Fuel Merchants Association of New Jersey.

According to Hugh Tompkins, executive director, the Association has cooperated with Lincoln Technical Institute, Newark, to develop a 100-hour training program. The course emphasis will be on "learning by doing." Live burners, wiring boards, pumps and control panels will be provided for the student's use in working out a wide variety of typical problems. The course will stress proper use of the CO_2 analyzer, draft gauge, stack thermometers and similar test instruments.

Thorough understanding of basic electricity and automatic control operation will be emphasized. Principles, repair procedures and adjustment of high pressure, low pressure and rotary flame burners will be covered in detail as well as service problems connected with hot water, steam and warm air systems.

Among the manufacturers cooperating by providing charts, manuals and equipment are Webster Electric Co., Minneapolis-Honeywell, White-Rodgers, General Controls and Penn Controls.

Classes will be held two nights per week over a three-week period. Each man completing the course will be awarded a Lincoln Technical Institute diploma as well as an Association certificate.

Markwell named President at Meeting of Good Timers

THE ANNUAL MEETING of the Oil Heat Good Timers, held on June 3 during the Boston oilheating Exposition, elected Bernard W. Markwell president. Others named at the same time were: Ted Low, first vice-president; George E. Egan, second vice-president; Dick Raymond, secretary; Art Bierman, treasurer; Ike Winston, sergeant-at-arms.

The group is planning a gala social gathering during OHI show week in New York next April.

During 5 years of severe service—

"Our MACK has never failed us"

"Five years ago, we assigned our first Mack tanker to our most difficult route; over Storm King Mountain to the U. S. Military Academy at West Point. Not only has the Mack turned up on time, every time, but over-all operating costs have been consistently low—and still are," says President Jerome S. Affron of Affron Fuel Oil, Inc., in upstate New York.

"That's why, when Mack introduced its "N" model COE, with its excellent maneuverability, visibility and driving ease, we were glad to welcome another Mack to our fleet."

It's worth repeating: **You get more work out of Macks because more work goes into Macks.** Ask any Mack user. Your Mack branch or distributor will gladly furnish names. Ask them today. Mack Trucks, Inc., Plainfield, N. J. In Canada: Mack Trucks of Canada, Ltd.

MACK
FIRST NAME FOR
TRUCKS

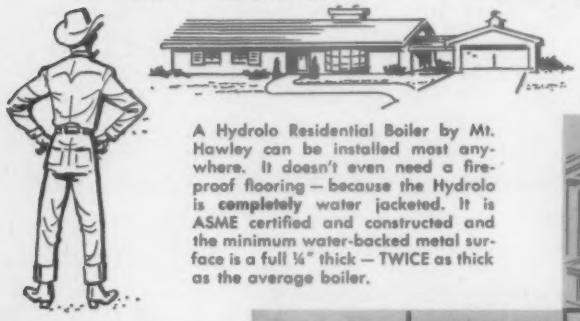
HYDROLO MHM

There are qualified Mt. Hawley sales personnel located throughout the United States (and in foreign countries, too!)

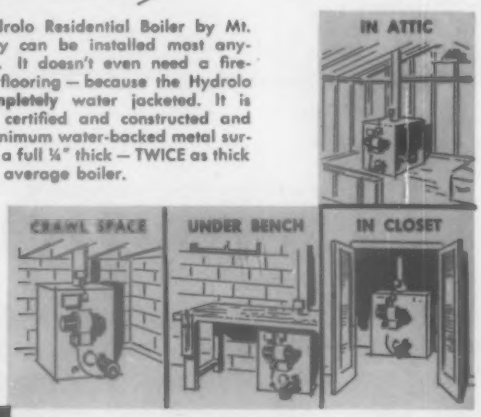
For the location of the salesman nearest you, drop a line to:

Mt. Hawley Mfg. Co.
Sales Division
Box No. 583
Indianapolis, Indiana

WHERE IN THE HOME CAN'T YOU INSTALL A HYDROLO?



A Hydrolo Residential Boiler by Mt. Hawley can be installed most anywhere. It doesn't even need a fireproof flooring — because the Hydrolo is **completely** water jacketed. It is ASME certified and constructed and the minimum water-backed metal surface is a full ¼" thick — TWICE as thick as the average boiler.



MHM Mt Hawley MFG. CO.

1209 W. Alta Rd.
Peoria, Illinois

Sales Division
Box 583
Indianapolis, Indiana

St. Louis Oil Heat Institute names Bretsnyder President

RUDY BRETSNYDER, Porter Oil Refining Co., has been elected president of the Oil Heat Institute of St. Louis. He has served as the group's vice-president for 11 years and succeeds A. Jack Becker, Becker-Marsden Co., who was president during that time.

Owen Hartog, Paul D. Hartog, Inc., was named vice-president; and George Koertel was re-elected to his 17th term as secretary-treasurer.

In addition to Bretsnyder, Hartog and Becker, the board of directors includes Paul L. Browne, Independent Oil Co.; E. W. Goebel, City Products Corp.; Maurice Seidel, Seidel Co.; and Ralph Grassmuck, St. Louis Gasoline & Fuel Co.

South Carolina Oil Jobbers plan Meeting in Charleston

THE 16TH annual summer meeting of the South Carolina Oil Jobbers Association will be held at Hotel Fort Sumter, Charleston, on August 9-11.

The Tuesday afternoon meeting will be devoted to a fueloil session with a discussion of oilheating heating promotion through the National Fueloil Council.

James L. McIntyre, Sr., left, Hartford, re-elected president of the Twenty-Five Year Club of the Connecticut Petroleum Association, and Franklin L. Kundahl, right, East Hartford, congratulate R. S. Hopkins, West Hartford upon his election to the club. The 25-year club is made up of Connecticut independent oilmen who have served the industry for 25 years. Awards were presented at the annual banquet held at the Griswold Inn, Essex. Other officers not pictured are: Abraham N. Alderman, New Haven, vice-president; and Arnold J. Grant, Sr., New Britain, re-elected club treasurer.

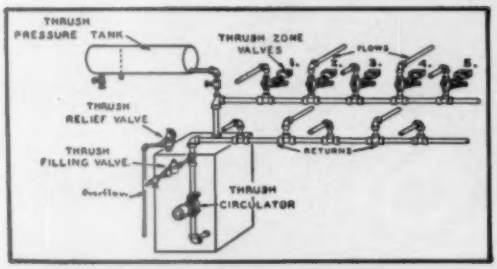
New Sales Builders from THRUSH

CLOSES TIGHTLY

Simplifies Heating or Cooling Installations

Eliminates Wasteful Overheating

REDUCES COST OF MULTIPLE ZONING



ILLUSTRATES SIMPLICITY OF TYPICAL 5 ZONE SYSTEM

Zoned heating or cooling increases comfort and cuts operating costs. New Thrush Zone Valve also greatly reduces initial cost of multiple zone installations through simplified piping, low voltage wiring and less labor.

THE NEW Thrush Zone Valve is the finest and most scientifically designed zone control valve for hot water heating or cooling systems. Rugged synchronous motor assures positive and quiet operation. This Zone Valve has a manual adjustment for gravity circulation, if needed.

Body, top and motor gear box can be mounted in any of several positions to make installation easy. It operates from standard electrical controls. Sealed contact switches eliminate dirty switch troubles. All parts in contact with water are brass and the seat is a special heat-resistant, non-sticking composition. See your wholesaler for more information or write Department C-8.

Quality Hydronic Heating Specialties

Thrush Water Circulator

H. A. THRUSH & COMPANY
PERU • INDIANA

GIVE YOURSELF THE

ADVANTAGES

of faster delivery
less maintenance
and greater safety with...

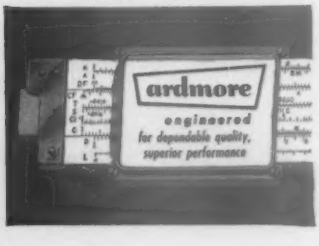
ardmore

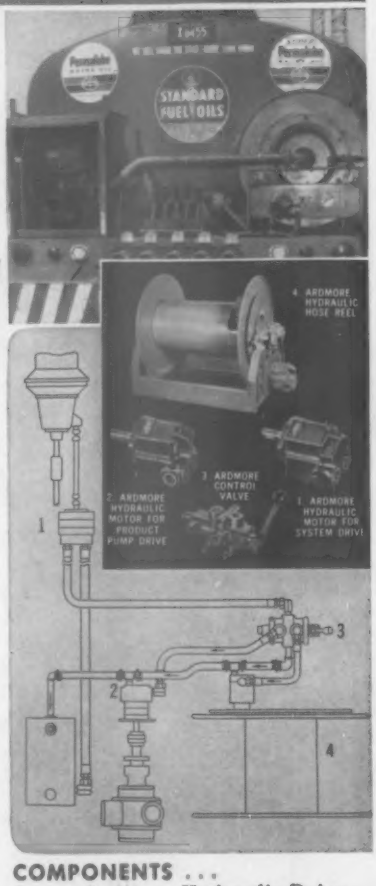
HYDRAULIC DRIVE SYSTEMS

(U.S. Patent No. 2,816,767)

for product pump and hose reel drive

Here's a drive system that's already proved on hundreds of installations. You can increase delivery speed as much as 30% compared with mechanical drive systems... because Ardmore permits ideal product pump placement. Protects truck engine and transmission from shock loads. Operates under relatively low pressure... and at zero by-pass when not under load. System is virtually maintenance free since it is self-lubricating. Easily installed. 100% guaranteed for performance, providing system contains all Ardmore components. For every delivery truck or transport need... for handling fuel oil, diesel fuel, aviation gasoline and related liquids. Your inquiry is invited.





COMPONENTS ... for an Ardmore Hydraulic Drive System consist of Ardmore hydraulic drive motors, control valve and reel... to be used with product pump, meter and fittings of your choice. Supplied for single or multiple product delivery trucks.

ARDMORE PRODUCTS

1831 Shermer Road • Northbrook, Illinois

Eastern Office:
612 Commerce Road, Linden, N.J.

International Sales and Service

July Edition of ARI Directory carries Ratings on 1611 Units

RATING DATA on 1,611 models is listed in the July edition of the "Directory of Certified Unitary Air-Conditioners," published by the Air-Conditioning and Refrigeration Institute, Washington, D. C.

The rated units are the products of 41 of the 47 manufacturing companies participating in the certification program developed by ARI's unitary airconditioner section. Six other companies have signed contracts to join the program but have not completed the testing and rating preliminary to inclusion in the Directory.

The companies participating represent well over 80% of the total industry shipments of unitary equipment.

A series of interviews with dealers in nine cities indicated a widespread knowledge of the program and an enthusiastic approval of its aims.

Toronto Chapter elects a new Slate of Officers

TORONTO CHAPTER, Oil Heat Association of Canada has named Ed Canning, Hygrade Coal Co., president; Murray J. Bowes, Lake Simco Ice & Fuel, vice-president; J. D. MacKenzie, Supertest Petroleum, secretary-treasurer; R. B. Dickinson, general manager.

Directors elected were: Fred Birch, Elias Rogers Co.; Hugh G. MacKenzie, Shell; John Milnes, Milnes Fuel; D. R. Taylor, Liquifuels; A. P. Hickox, Liquiflame; Ian McIntosh, B. A. Oil; J. Sweeney, Tulloch & Stephen.

Warm Air Association plans Convention on December 3-4

THE ANNUAL CONVENTION of the National Warm Air Heating and Air Conditioning Association will be held in St. Louis, Mo., on December 3rd and 4th.

All meetings will be held at the Chase Park-Plaza Hotel. Charles H. Franke, American Furnace Co., is chairman of the convention committee.

New underwood Add-Mate

only 7½ lb.—all-electric machine that adds, subtracts, multiplies, totals, sub-totals

IDEAL FIGURING MACHINE FOR BURNER SALES-FUEL OIL DELIVERY PARTS AND SERVICE DEPARTMENTS

Wonderful big-machine results: only $168.50 (PLUS TAX)

adds · subtracts · multiplies · totals · sub-totals

- 10-Key Keyboard—for error-free performance
- Carry it home or on trips for on-the-spot figuring
- So simple to operate, anyone can use it
- So light you'll have to hold it to believe it

underwood

MASTERS YOUR PAPERWORK

To call underwood consult the Yellow Pages

Order your Add-Mate* from your local dealer or Underwood office

STYLED IN 5 DECORATOR COLORS

*An Underwood Trademark

fuel oil & oilheat

1st FOR FASTER FILLING

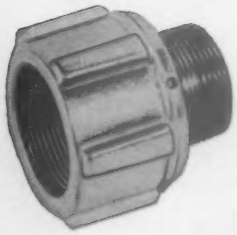
FASTER: 1/4-turn hook-up.

SAFER: with positive Cam-Lock.

SIMPLER: one nipple for all fills.

Now is the time to reduce delivery costs as much as 20%. We'll prove it to you with *your* equipment at *your* office.

1st WITH THE Adjust-O-Swivel



Here is a Swivel that not only eliminates rotary stress on fueloil hose and nozzles, but gives swiveling action WITHOUT leaking or binding.

An occasional simple adjustment without removal from hose and nozzle keeps it swiveling perfectly for extended service.

When the "O" ring finally wears out, NO NEED TO THROW AWAY. The sealing "O" ring can be replaced, for many more months of service.

Model SW-22 designed for 1¼" to 1½" hoses and nozzles.
SK-10 Adjusting Kit: $1.50.

$9.95

Philly RAPID-TITE Division

PLASTIC AND APPLIANCE CO., INC.

5311 Westminster Avenue, Philadelphia 31, Penna.

MAIL TODAY

☐ Have your representative call.

☐ Ship me one Adjust-O-Swivel with Free Adjusting Kit.

Name .....

Company .....

Street .....

City ..... State .....

Long Island Credit Managers plan Conference on Sept. 17

THE LONG ISLAND Petroleum Credit Manager's Association has scheduled its fourth annual all-day credit conference at the Garden City Hotel, September 17.

Theme of the conference will be "Credit is Management" and education of the consumer, of credit personnel, and of credit management. This group numbers among its members representatives of three major oil companies and some 90 fueloil dealers in Queens, Nassau and Suffolk.

Massachusetts Trade School publishes student Newspaper

STUDENTS of the Oil Heat Institute's Technical School at the Springfield, Massachusetts Trade School have published a newspaper containing facts about the school, its curriculum and student activities.

The director, Perry M. Best, has written an article for the first issue on the summer training project, in which he asks industry cooperation to find employment for students during the summer in the oilheating industry.

Firms interested in finding out more about the school should write Perry Best, OHI Technicians School, 1300 State St., Springfield, Mass. George E. Lind, Combustion Controls Division, Electronics Corp. of America, Cambridge, Mass., is chairman of the school committee.

NYOHA annual Outing takes place June 25

THE ANNUAL golf tournament and field day of the New York Oil Heating Association, Inc., at the Engineers Club, Roslyn, L. I., played host to about 450 on June 25.

The usual golf and athletic events were somewhat curtailed by showers, but the entire program was worked in without too much trouble. In the softball game the dealers proved conclusively they had more punch with a 12 to 3 win, but the manufacturers demonstrated their pull with a decisive win in the tug-of-war.

A dinner and prize awards continued the all-day activity.

"When a meter handles millions each year, it must be accurate," says Sinclair in Baltimore

Some of the meters on the active racks at Sinclair's busy Baltimore terminal are estimated to have billed $20,000,000 worth of gasoline each since installation. And that's not unusual; many big terminals have meters that handle this much and more.

A very small percent of error in these busy meters easily spoil the plant's good operating record... and give profits away. No wonder Sinclair's operations men say *accuracy is the one most important factor* in selecting meters.

This terminal has eighteen Neptunes, five of which are big 650 gpm units. With 12-inch suction lines and a 1400-gpm pump, they get large transports rolling in 10 to 12 minutes, including check-in and check-out with meter-printed tickets.

"Our Neptunes are tested with 500-gallon provers, and seldom need any adjustment," says Mr. Willard E. Harrison, Terminal Superintendent. "We like Neptune's positive calibration adjuster. It doesn't drift.

"With such a heavy load on the meters day in and day out, Neptune's Unit Replacement Plan has been a great time saver. We carry spare registers and chambers and do all our own field service because it is a simple matter to change them within minutes."

This fine experience with Neptune meters is a business pleasure you, too, can enjoy. Specify Neptune meters for all trucks and loading racks... for accuracy you can bank on.

NEPTUNE METER COMPANY 19 West 50th Street, New York 20, N.Y.

neptune

for a better measure of profit

Two Ways to Bigger Profits!

Sell the People's Choice!

Federal Filter

Look at these unsurpassed benefits. Federal's 16 extra-large filter pockets trap the contaminating impurities found in fuel oil and prevent clogging of burner nozzles. This means trouble-free furnace operation and the end of expensive service call-backs. One model handles all filtering jobs, whether pressure or gravity type.

Draft King

Look at all these money-saving features! Draft King turns flue gases into perfect heating combustion, not chimney clogging soot. Maximum draft provides full burning benefit of fuel and eliminates costly fuel waste so common with poor chimney drafts. Made of either all-weather galvanized steel or aluminum.

Show them, talk about them, sell them . . . they're PROFITABLE!

for information write to

NORWOOD PRODUCTS CO. • LUVERNE, MINN.

A division of A. R. WOOD MFG. CO., Luverne, Minn.

Hemphill elected President of credit Group in Portland

ROBERT G. HEMPHILL, Portland Oil Co., has been elected president of the Oil and Burner Dealers Credit Association of Metropolitan Portland, (Ore.) Inc. Other officers include: James Yeomans, Multnomah Fuel Co., vice-president; Roy Rockwell, Carson Oil Co., treasurer; and Lloyd Meisen, Jr., Sunset Fuel Co., secretary.

The nine-man board of directors includes the officers and James Dreling, Sunbeam Oil Co.; Kenneth C. Goodall, Jr., Goodall Oil Co.; Ian Shaw, Albina Fuel Co.; James Moran, Moran Fuel Co., and Lyle Neschky, Power Plant Engineering Co.

OHI of Long Island plans golf Outing on August 10

A STAG golf outing is being planned by the Oil Heat Institute of Long Island at the Great River Country Club on August 10.

Besides golf, there will be tennis, swimming, and baseball.

Northern New York Institute sponsors Meetings in Area

TWO MEETINGS were recently held on the same day by the Modern Oil Heat Institute of Northern New York, Syracuse, in Potsdam and Watertown.

William J. Dee presided in Watertown. Also on the program was George Madden, Jr., the Institute's president. Joe McAllaster was in charge of the Potsdam meeting.

Convention-Exhibit is held by Appliance Manufacturers

THE 27TH ANNUAL Convention-Exhibit was held by the Institute of Appliance Manufacturers at the Netherland Hilton Hotel in Cincinnati on June 1-3.

Wisconsin Oil-Heat Institute hears Reports at May Meeting

REPORTS from various committees were featured at the May 28 meeting of the Oil-Heat Institute of Wisconsin, Inc., in Milwaukee.

The groups state-wide advertising campaign got under way on June 1.

(Please turn to page 84)

OIL BURNER PRIMARIES General Controls builds quality primaries...sturdy...simple ... service-free. And a complete line of heating controls for all warm air and hydronic systems—assuring you of *permanently satisfied customers.* Field service by specialists from 42 Factory Branch Offices ... stocks in conveniently located warehouses throughout the United States, Canada and Western Europe. Call in your local General Controls factory representative today.

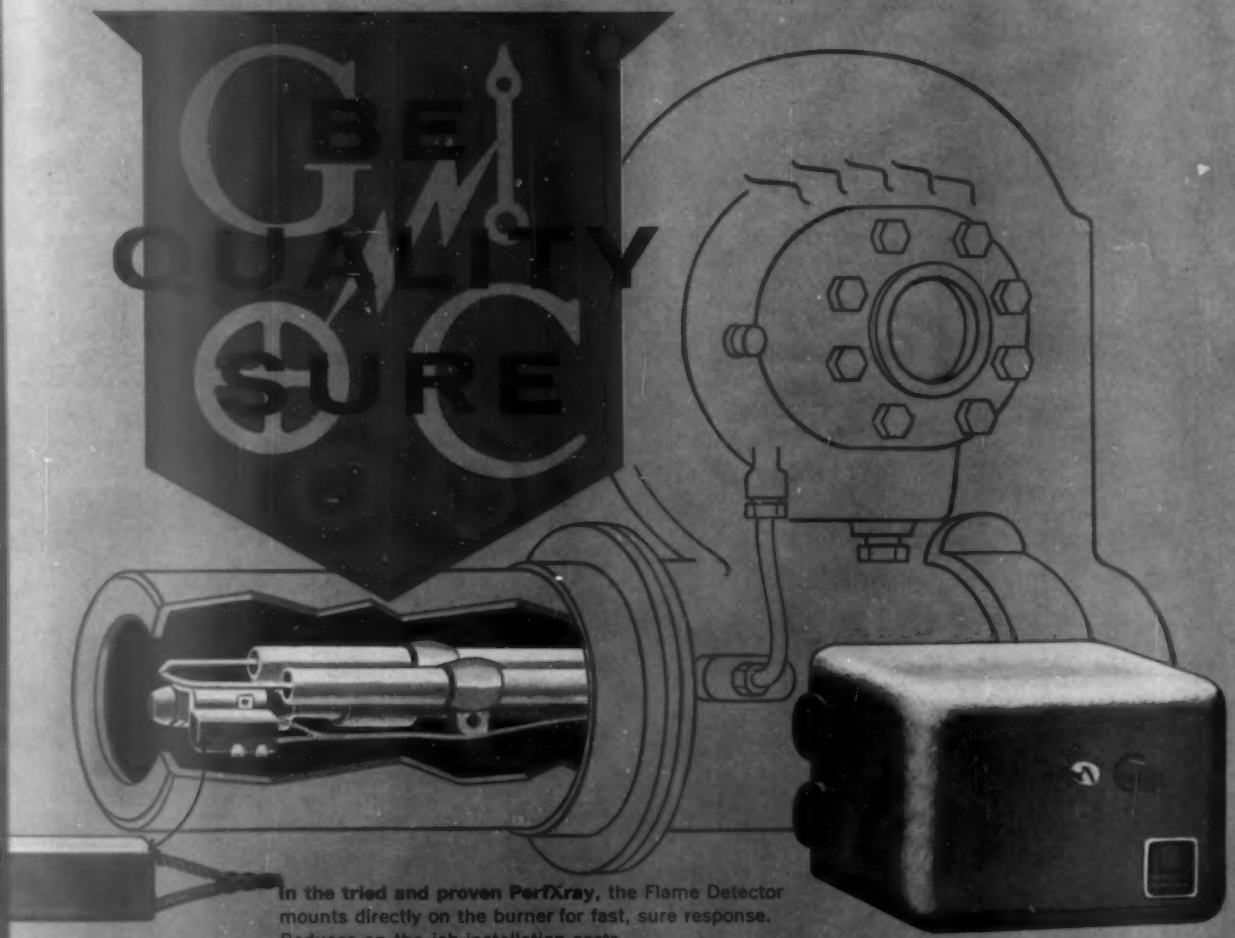
BE QUALITY SURE ... ALWAYS SPECIFY GENERAL CONTROLS

GENERAL CONTROLS

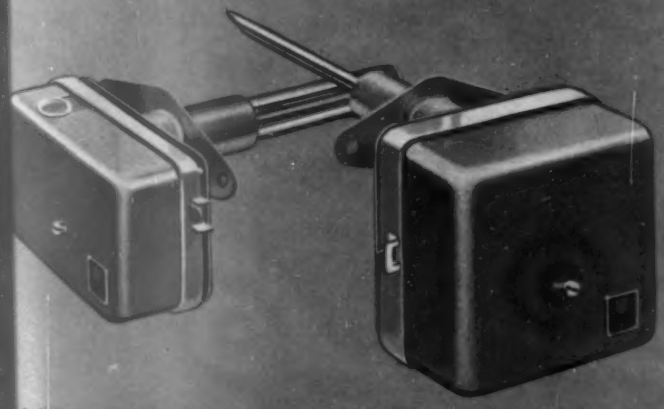
Automatic Controls for Product or Process

Glendale, Calif. • Skokie, Ill. • Guelph, Ontario, Canada

Eight plants—42 factory branch offices serving the U. S., Canada and Western Europe



In the tried and proven PerfXray, the Flame Detector mounts directly on the burner for fast, sure response. Reduces on-the-job installation costs.



full line of stack type oil burner primaries ... constant or intermittent nition; recycling or non-recycling, plus constant ignition line voltage.

Two-piece oil burner primary with stack mounted sensing element.

Your MONEY GROWS when you install

Luxaire®

Many thousands of successful dealers have found that the sure way to increase their business is by concentrating on Luxaire.

For Luxaire is the complete line of Heating and Air Conditioning Units which offers deluxe design and construction at consistently competitive prices.

This means, with Luxaire, that you have the qualities to command extra profits on your replacement and custom-installation jobs, plus the power to compete successfully against cheaply constructed units in price bidding. With Luxaire, you do *not* choose between excellence and a low price — Luxaire gives you *both!*

Furthermore, you are not burdened by having to carry a large inventory in order to enjoy a favorable price. A nearby Luxaire jobber stands ready to provide speedy service on the type and size of unit which you require.

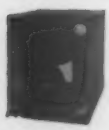
If you want to make your money grow, by making it *go farther*, see your Luxaire jobber, today!

Compact Gas Fired and Oil Fired Winter Air Conditioning Units are completely Assembled and Wired, Heavily Constructed and Smartly Styled. Equally adaptable for the basement, the utility room or alcove.

Gas Fired and Oil Fired Horizontal Furnaces are low and compact for the "tight" spaces — a complete line of either type, having the superior qualities of heavier construction.

Gas Fired and Oil Fired Basement Units. Burn either Gas or Oil with equal efficiency. Handsome Console Cabinet. Assembled and Wired Oil Units — 84,000, 95,000 and 112,000 Btu Output.

Gas Fired and Oil Fired Counterflow Units are completely assembled and wired and have the same compact design, heavy construction and trim styling as the upflow units.



2, 3 or 5 H.P. Air Cooled Condenser-Compressor Unit. Underwriters' Listed for Outdoor Installation.

Upflow Winter Air Conditioning Unit with Circular (Plenum Type) Cooling Coil.

Basement Type Winter Air Conditioning Unit with Circular (Plenum Type) Cooling Coil.

Counterflow Unit with Counterflow Cooling Coil.

Horizontal Furnace with Duct Type Cooling Coil.

Air Handling Blower and Cooling Coil Unit.

Gas Fired Unit Heater. 5 Sizes.

Gas Conversion Burner.

THE C. A. OLSEN MANUFACTURING COMPANY • • ELYRIA, OHIO

Luxaire® HEATING & AIR CONDITIONING UNITS

fueloil & oilheat

Significant Burner in a Parade of Progress

Shell's Motives behind its new blue-flame Burner are clear and simple, as is the Burner itself

by John W. Schulz

GLOWING ACCOUNTS of different inventors' successes in achieving the summit in burning fueloil are not unusual. Several times a year, the members of the FUELOIL & OIL HEAT editorial staff receive enthusiastic reports of how a new type of oilburner, not yet being manufactured, promises to revolutionize oilheating.

I made the preceding points at the start of an article in the December 1958 issue, which reported on an unorthodox domestic oilburner.

"Your points are true, but they are understatements," said an executive of the petroleum industry, whose everyday work includes delving into and evaluating new ideas bearing on extended and improved uses for petroleum products.

"You could have said," he continued, "that anyone known to be receptive to new oilheating ideas finds that rarely a week goes by without news of a revolutionary new oilburner or accessory coming in.

"Although the many combustion ideas applicable to fueloil invite this," he went on, "the new-idea series is not unique to the realm of oilburners. A never-ending stream of inventors is always waiting to demonstrate, for example, gasoline carburetors newly developed to provide 50% more miles-per-gallon than carburetors now in production . . . also special carburetor and heated intake-manifold arrangements that allegedly permit the typical family automobile to run on diesel oil just as well, or at least almost as well, as on gasoline."

These comparisons from my friend led into a discussion of philosophies for evaluating new ideas in any field.

"Don't get excited at the news that an inventor has come up with a new idea," my friend recommended, "unless the record of his past achievements justifies it. News of new ideas and inventions can be highly impressive—if the news comes from men and organizations whose records of past achievements are excellent.

This thinking does not rule out the possibility that an inventor previously without accomplishments in the form of well-known oilburners may come up with an entirely new form of oilburner that will revolutionize oilheating. But this thinking puts greater value on the efforts of those having records of achievement than on those who have tried but not succeeded. Also, it puts greater value on the potential future success of those who have tried and succeeded, than those who have never tried before.

Released recently were facts, from the Shell Oil Company, about a new low-capacity blue-flame oilburner which has been developed to the prototype stage by Shell oilheating specialists working for a few years on a new idea in Shell's oilheating laboratory at Sewaren, N. J.

The new idea, not the set-up of oilburner equipment which the Shell engineers show, really is the big point of Shell's latest announcements. The idea includes a novel form of combustion, and was developed specifically to meet today's requirements for highly modern, exceptionally efficient and foolproof oil flames of low gph capacity (down to as low as one-tenth of a gallon-per-hour) for powering the smallest water heaters needed for one-family homes, and for the smallest house-heating furnaces and boilers needed today.

Shell's announcements about technical developments in the field of fueloils and oilheating equipment are not taken lightly by the men of the fueloil and oilheating industries. A study of why this is true is in order at this time, when the spotlight is on the latest Shell development. Related to this is the idea outlined earlier, to the effect that men successful in the past with new ideas have gained a reputation that may add value to ideas they advance today.

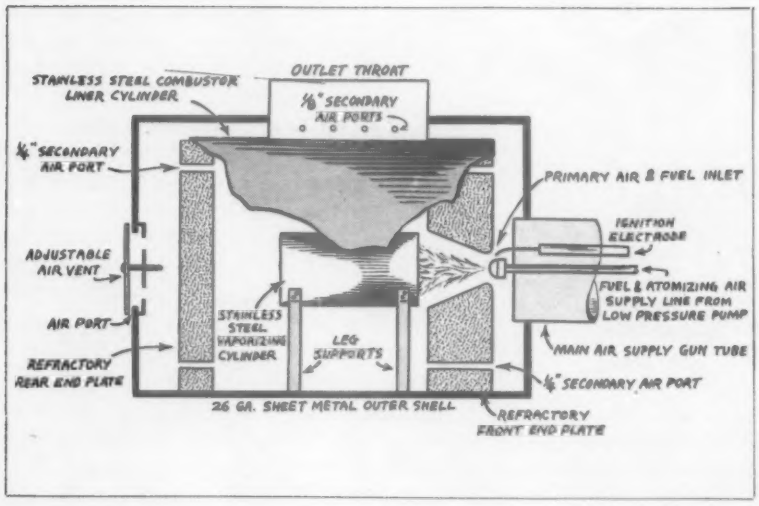
Shell Oil Company proved, starting in 1930, that it was determined to assist the growth of oilheating and the increased use of fueloil in a manner and on a scale appropriate for a major oil company. In that year, it started large scale research and development work on oilburners and fueloils at its laboratory in Sewaren, N. J.

The purpose of the first work done at this laboratory was to determine which properties of fueloil are important in different types of domestic oilburners. Success with this work could lead to the distribution of fueloil which would give good performance in the oilburners in use at that time.

Practical Research

This first Shell effort in the realm of oilburners and fueloil proved that the men doing the work excelled in coupling pure research aspects with aspects 100% practical and down-to-earth. The effort was characterized by the extreme thoroughness that could be expected of major oil company men, backed up by the resources and finances of their company.

Men worthy of the name "scientists" did the work. They came up with several important, new ideas on the performance of fueloil in vaporizing burners, including wall-flame rotary burners, of course. At that time, in the early 1930's, vaporizing burners were relatively popular for firing furnaces, boilers, and water heaters. They were giving well-known difficulties, which the Shell scientists in the Sewaren laboratory aimed to help pinpoint, evaluate, and solve.


STAINLESS STEEL COMBUSTOR LINER CYLINDER
OUTLET THROAT
⅛" SECONDARY AIR PORTS
¼" SECONDARY AIR PORT
PRIMARY AIR & FUEL INLET
IGNITION ELECTRODE
ADJUSTABLE AIR VENT
FUEL & ATOMIZING AIR SUPPLY LINE FROM LOW PRESSURE PUMP
AIR PORT
STAINLESS STEEL VAPORIZING CYLINDER
LEG SUPPORTS
MAIN AIR SUPPLY GUN TUBE
REFRACTORY REAR END PLATE
¼" SECONDARY AIR PORT
26 GA. SHEET METAL OUTER SHELL
REFRACTORY FRONT END PLATE

Out of this first effort to help oilheating came a new and valuable test procedure for determining the tendency of a domestic fueloil to form carbon on an oilburner's vaporizing surfaces. This was the 10% bottoms carbon-residue test.

The new test procedure at once served to eliminate erroneous thinking which many vaporizing-burner specialists had followed which had included coupling the end point of a fueloil, ascertained in a distillation test, to the oil's tendency to deposit carbon on vaporizing surfaces.

In attempting to judge how easily a domestic fueloil would be ignited in a vaporizing burner, many burner engineers and technicians had been impressed most by the flash point of the oil. Shell came out with a new technical point, to the effect that the 10% point of a distillation test (not the flash point) was directly related to the oil's ability to light off easily in a vaporizing burner.

Shell's first efforts to help oilheating brought out additional points about the behavior of fueloils in burners. The aim was to go as far as possible in determining in a thorough, scientific fashion which properties of fueloil were most important for the existing oilburners, and to lead towards the production and distribution of fueloils tailored to the burners.

No effort was made to confine these early advancements in knowledge within the Shell organization. They were publicized widely. In 1933, I wrote a feature magazine article which reported in detail on the Shell efforts and findings.

After they had gone as far as they could in studies of tailoring fueloils to the widely used domestic oilburners, the Shell oilheating scientists started working on oilburner improvements. This was logical, as in working on fueloils they had learned that improvements in oilburner designs could often overshadow improvements in fueloils.

This oilburner improvement work culminated in the development of the Shell combustion head for pressure burners, fully developed and field tested by 1947, and put into production in 1948.

For the first year the Shell head was in production, burner manufacturers featuring it paid a royalty charge of $1 per burner. The sole objective of this was protection of Shell's good name, through having control over the manufacture and application of the new combustion head.

Next, Shell gave this combustion head royalty-free to the oilheating industry at large. That's the basis today, when Shell-head oilburners are featured by more than 50 burner manufacturers. (Such combustion heads are made for firing rates from .75 to 35 gph.)

This effort on the part of a major oil company, to improve oilheating by developing and designing a combustion head, and then to make a present of the design to the oilheating industry, was without precedent.

While developing the Shell head, the men working on it gained great respect for the advantages of a delayed-opening solenoid valve in the nozzle line of a pressure burner. The use of such a valve, they learned, greatly improves burner start-ups and shut-downs. They stipulated that such a valve must be used with the Shell head—to gain all of the clean-burning performance inherent in this head. Delayed-opening oil valves became exceedingly popular as the result of this.

Most of the fueloil and oilburner work done at the Shell laboratory has been based on the needs of the oilheating and fueloil industries, as evaluated by the scientists. The laboratory's early activities show this.

To begin with, its workers saw the need for good fueloil, which matched the requirements of the burners then in use.

Next, they saw a need for good performance from pressure burners; they produced the Shell head.

Smoke Testing

Continuing the same thinking, in 1946 these men working in the Shell laboratory saw the need for a simple and dependable method for measuring the smoke coming from an oil flame—or the lack of smoke or haze. They found that no two men observing an oilburner flame could agree that it was "absolutely clean," "acceptably clean," or "intolerably hazy or smoky."

Shell's technicians developed a smoke measuring method, which at first they used in the laboratory, and which included smoke readings from zero to nine. They devised and standardized a new smoke scale based on these readings.

Their method and smoke scale then were turned over to the Bacharach Industrial Instrument Company for commercial development, which led to the manufacture of a portable smoke-checking instrument for field use by servicemen.

The Shell method for measuring smoke is now the standard method of the oilheating industry; it is used in America and Europe. The familiar term, Shell-Bacharach smoke scale, designates Shell research and development of the modern smoke-checking

method—coupled to instruments of Bacharach manufacture.

This smoke-checking method is an example of a basic idea, conceived and developed by qualified scientists in a major industry, being put to use by an equipment manufacturer. The same pattern, which has been demonstrated in the past to be workable and satisfactory, may be followed in the future on new ideas in oilburners, which these Shell qualified scientists have been investigating.

The tank-corrosion inhibitor, Sonitor, is still another example of the Shell scientists recognizing a problem of the fueloil and oilheating industry, doing extensive research and development work, and coming up with a solution to the problem and presenting this to an interested industry.

The Shell men saw a need for an effective method for protecting the bottoms of fueloil storage tanks against attack caused by the presence of water—in the years that followed the end of World War II. Many tank bottoms started corroding and leaking, to the great distress of oilburner men and fueloil retailers. The Shell men learned that important factors included the installation of tanks of relatively thin metal; also, the oil industry was beginning to provide especially clean fueloil which, unlike earlier domestic fueloil, provided no natural deposits and gums to protect tank bottoms from attack related to accumulated water.

Tank Study

After the completion of a project that included research and development work, Shell announced it had found a solution to the tank-corrosion problem. This company revealed full details of what it had done, and presented its solution to the oilheating and fueloil industries at large.

Several questions about research work of this kind often are asked, but to my knowledge answers are seldom spelled out.

Question #1—What does the Shell Oil Company get out of developing ideas for the oilheating industry, then handing them out for-free to this industry, and to manufacturers who will exploit them and profit by their use?

Question #2—How can the petroleum industry justify the expenditure of great sums of money on the development of oilheating equipment, though it will not obtain direct monetary returns as the result of the sale of the equipment?

Talks with men of the Shell Oil Company bring out the fact that they can answer these questions simply and clearly. It is wise to continually improve oilheating equipment—to sell the fueloil this equipment uses against competitive fuels. Money should be spent in these ways on research and development; ultimately the industry gets back this money—because fueloil sales increase. Only shortsightedness would require direct profits from every dollar spent on research. It's the overall picture that counts; building up the acceptance and demand for many important products includes much ground work, which in itself is not profitable, but which builds up a solidly good business which produces impressive profits throughout future years.

Early Report

In the December 1956 issue of FUELOIL & OIL HEAT, I reported briefly on, and showed a photograph of, an oilburning set-up that included an atomizing nozzle—but that produced a silent, blue flame by using a unique, newly developed, combustion process. Its minimum firing rate was one-tenth of a gallon-per-hour; its maximum firing rate could be as high as is needed for house heating.

The scientists working in the Shell laboratory had devised and developed this oilburner arrangement because, in 1955, they had spelled out their version of still another need of the oilheating and fueloil industry. They had found a need for a highly practical oilburner, which could use usual domestic fueloils, and which could produce a small flame suitable for smallest house-heating furnaces and boilers, and smallest water heaters. Fueloil would do best in fighting the use of gas and electricity in the fields of home heating and water heating, these Shell men had concluded, if oilfired water heaters were available with Btu input rates as low as 30,000 Btu per hour.

As the result of spelling out this new need, in 1955 they started work to find the answer. A short time ago, midway through 1959, they had completed their project.

What they produced is not a new oilburner, ready for production. Instead, it is a combustion process, a new way of burning oil, which they can demonstrate by coupling together standard oilburner parts which already are being made. They emphasize that the particular equipment set-up they now demonstrate to any interested company is a research tool rather than a finished product.

This burner's novel feature is its combustion unit, its firebox equipment, which is shown in a schematic drawing that accompanies this article. The drawing does not show the oil-handling and air-handling parts which the Shell men use to make this burner work. These parts are relatively unimportant to the new idea.

Actually they are using a low-pressure air-oil fuel-unit fitted with a cam which they modified to produce firing rates from 0.1 to 0.5 gph. They also use a small, centrifugal blower, and a jump-spark ignition system identical to that used in a usual domestic gun-type oilburner.

New System

The "combustor" in the accompanying drawing is a horizontal cylinder made of stainless steel, with inside diameter of 8½ inches, and length of 11 inches. This is enclosed in the 26 gage sheetmetal outer shell, the interior of which is under slight air pressure, provided by the burner's blower. This slight air pressure sends air for combustion into the ¼" secondary-air ports shown in the drawing. Actually there's a circle of these holes in each end of the "combustor." The same slight air pressure also sends combustion air through the set of ⅛" secondary-air ports below the outlet throat, shown in the drawing.

Although an important amount of air for combustion flows into the "combustor" through the large, center opening in the "refractory front-end plate" (see the drawing), where the atomizing nozzle is located, the ⅛" and ¼" secondary-air ports are essential. It's the controlled flow of secondary air through these ports that is

entirely responsible for the unique, blue, silent flame this burner produces.

Without these all-important secondary-air ports, and with all of the air for combustion entering the "combustor" conventionally around the nozzle, this burner would not produce a flame that is silent and blue—it would produce a flame very much like, if not identical to, that produced by a usual high-pressure or low-pressure gun-type burner.

The start-up of this burner is, in fact, similar to that of a usual gun burner. For a start-up, more than the normal amount of air goes into the "combustor." The "adjustable air vent," at the left in the drawing, can be closed off somewhat or entirely during a start-up to provide the burning, atomized oil with the extra air needed during the warming up period.

Start Up

Also during starting up and warming up of the burner parts, the spark of the ignition system is kept on long enough for the "stainless steel vaporizing cylinder" and the "combustor" to become so hot that a stable flame is established in about 90 seconds.

At the end of this short, warm-up period, there's no longer a need for the extra, combustion air that was needed for the start-up. The rate at which air goes to the burning oil is decreased. One method for cutting the air flow precisely and in a highly suitable manner is to open somewhat, at this stage, the "adjustable air vent." Doing this, instead of closing a blower damper of the burner for example, serves well for maintaining the proper, slight, plus air pressure on the 1/8" and 1/4" secondary-air ports—so that the proper amount of combustion air will flow into the burning fueloil through each of these all-important ports.

With the rate of flow of the combustion air thus cut back to normal, and the oilburner performing normally, the flame is completely silent. It is invisible, except for jets of light-blue color at the locations where the secondary-air ports are jetting streams of air into an atmosphere containing atomized and vaporized fueloil.

As specialists at combustion readily understand after studying this oilburning arrangement, its uniqueness lies in its combustion process . . . which includes first atomizing the fueloil, then heating the atomized oil sufficiently in the stainless steel vaporizing cylinder to fully vaporize the oil droplets. Doing this in the absence of sufficient air for complete combustion produces an oil gas at a high temperature.

During the process, each droplet of atomized oil is heated to far above its boiling point (the temperature the oil droplet reaches is far above the end point of the oil). The result is production of oil gas, only partly subjected to combustion as the result of the small amount of primary air given it, and ready for complete combustion at the points where the secondary-air jets flow into it.

In this unique oilburner, streams of secondary air are burned in an atmosphere of oil gas. That has been done before in oilburning, but it has not been done in this fashion, it has not been done to my knowledge with the highly effective help of an atomizing nozzle. In one sense, this is a vaporizing burner—but it vaporizes the oil fully, before the oil is given sufficient air to burn completely, while the oil is in atomized form floating through air, and without the oil being in contact with supporting material while it is being vaporized.

1. This combustion process gives high combustion efficiencies, the result of 12% to 14% CO_2, with absolutely clean burning.

The burner described in the article is commonly known as the Ventres burner since laboratory scientist L. H. Ventres, above, supervised its development.

2. It does this at firing rates down to one-tenth of a gallon-per-hour.

3. Its combustion is literally silent.

4. It uses any domestic fueloil, down to the heaviest oil classified as No. 2.

5. It fully vaporizes the fueloil to prepare the oil for combustion, but it does this without any formation of carbon.

6. Use of the low-pressure method of atomization avoids any nozzle-plugging trouble.

7. The burner's moving parts can be made up of standard parts already in production. The combustion chamber can be inexpensively mass-produced.

8. The burner uses the jump-spark ignition system that deservedly is the most popular type of ignition for domestic burners. Such ignition is simple, inexpensive, troublefree and dependable.

9. The extensive use of this burner in the field should present no service problems; all of the parts and their functions can be understood easily by any serviceman. Standard or special primary controls can be used.

10. Using principles of combustion that are well known to oilburner engineers, this entire process for the combustion of fueloil can be understood easily. It contains no mysteries!

Good Background

This effort at producing a new type of oilburner had the benefits of impressive financial backing, an enormous laboratory, a large research staff that knows all kinds of oilburners from A-to-Z, and overall research facilities that have gained a reputation for success in achieving objectives.

Incidentally, some of the recent activities in the petroleum industry have given some oilheating men the idea that oil companies all have turned over a new leaf, and all are for the first time starting to take an interest in oilburners and oilheating.

That's not so for the Shell Oil Company. In offering its new blue-flame oilburner for study and further development by interested equipment manufacturers, Shell is highlighting the fact that it has operated its oilheating and fueloil laboratory continuously since 1930.

A group Effort pays off

Traverse City equipment Distributor and fueloil Dealers effectively sell Oilheating

by V. M. Douglas

THE PROGRESS of heating comfort in Traverse City, Mich., has not been materially different from many comparable cities in the north-central section of the country. Natural gas was piped in about three years ago.

Last year, if you were to ask a local gas salesman in Traverse City about the heating situation there, you would have heard a story about like this: "First, there was wood from our forests; then coal was found convenient, as the wood supply diminished.

"Gradually fueloil came into the picture, for it was automatically controlled and eliminated all of the disadvantages of coal burning.

"Finally the oil and the oilburner people had it practically their own way. Some 15 or 20 companies were selling and installing oilburners, and four or five dealers were supplying the fueloil."

Then the gas man would begin to get enthusiastic, and tell about natural gas as the favorite fuel in Traverse. It was a cinch. Nearly every home was a prospect for the new high Btu natural gas for cooking and hot water heaters.

Most of the heating men who had been selling and installing oilburners had looked over the situation. They could see no reason to continue working with oilburning when they had nearly the whole city as gas prospects, and the utility was ready to help them make sales.

When that happened in northern Michigan, the fueloil dealers were out on a limb. With no burner installation or service facilities of their own, they had their choice between developing a mechanical department, or watching their fuel sales dwindle for lack of new customers and adequate service to old ones. They had not been accustomed to promoting their own business by aggressively pushing either burner or oil sales. It had not been necessary. Now, with the threat that gas would soon reduce their volume, what incentive did they have to send good money after bad?

Don't get the mistaken idea that all of the Traverse City fueloil dealers were spineless. There were good business men among them, but the situation just presented is typical of many communities where aggressive gas enters a complacent oil market.

Then in the Summer of 1958 something happened. Harry's Service Center, owned by Harry Domine, had been selling household appliances and oilburners. As distributors for Iron Fireman, they were not restricted to oilburners, for the line included coal stokers, and at least two different types of conversion oilburners, and gas burners, and furnace-burner units. Obviously, the organization included complete installation and service facilities. Most of their sales activity had been confined to oilburners until natural gas appeared. Having no specific interest in any type of fuel, they could easily switch their efforts toward gas.

However, their experience had convinced them that there was no heat like oil heat. Their belief in the superiority of oil to produce comfort, made them reluctant to switch to gas. They also realized that oilheating would not sell itself, and if something were not done about it, gas might take over the heating in their city.

In the meantime, Iron Fireman had been developing, testing and proving a new type of oilburning warm air heating system. They called it the Custom Mark II. When it was presented and demonstrated to Domine and his burner men, they decided the Mark II was just what they needed for Traverse City. It was something new and sensational.

George La Roche, sales engineer at Harry's Service Center, explained some of the features which he thought set the Mark II apart from others which had come to his attention.

Here was an oilburning furnace which would operate with no flue, stack or chimney as ordinarily required for the combustion of fueloil. A 3" pipe, or smaller, was sufficient to carry off combustion gasses—simply as a duct, with no influence on the fire. The normal temperature of the flue gas was about 350°. It could have been even lower, from the standpoint of good combustion, but to do so might present problems of condensation.

The use of induced draft fans is not new to combustion engineering,

Harry Domine (right) is the owner of the company and George LaRoche is sales engineer. They're in front of scale drawings of some of their jobs.

but it was new as incorporated in an oilburning furnace unit for domestic use. La Roche proceeded to demonstrate what the furnace would do. With the burner operating as it would be under normal operating conditions, he placed a white handkerchief over the vent outlet. After a short time he removed it. There was no sign of smoke, smudge or soot.

Someone looked through a pyrex covered observation port, and remarked that the fire looked very white. Perhaps the handkerchief could tell a different story if it were placed over the vent during the starting cycle, before the firebox was reflecting full heat to keep the flame at peak efficiency.

Clean Flame

The thermostat, which was serving as a switch, was used to stop the fire. After an extended cooling period, the handkerchief was again placed in position to catch that starting puff. The contact was made in the thermostat. The fan producing the induced draft started. After a few seconds the delayed oil valve opened. The clean white flame was instantly visible. There was no puff—not the slightest wisp of smoke. Again the handkerchief was clean.

Actually, it was explained, there was some excess air present during the first few seconds of operation, but after that the combustion efficiency was higher than is usually considered practical for intermittent domestic burner firing. That white fire did not indicate excess air, but was set at the factory to produce approximately 12% CO_2. Burners can be set before shipment because firing conditions are always constant. Oil pressure, nozzle size, combustion chamber size and the amount of air admitted are all constant factors.

Another question was asked: With such a small vent pipe, is it necessary to have a steep upward pitch to insure proper disposal of gasses? The question had been anticipated, for immediately a long, many jointed piece of three inch pipe was connected to the vent discharge connection. The pipe had more ups and downs than an elevator operator. To those familiar with the operation of an induced draft fan, it was no mystery; but to the homeowner who had seen struggles with natural draft it was a revelation.

It was made clear how problems of excess draft, inadequate draft and varying draft were eliminated. Then came the $64 question. What about service? How do you prevent nozzle plugging? The smallest furnace used a .75 gph nozzle. There was a special combustion head to work in conjunction with that nozzle. The parts involved were located in a manner which caused the cold incoming air to pass over the nozzle while the burner was in operation, and the nozzle was shielded from reflected heat after each shut-down. Nozzles seldom exceed room temperature; therefore, no coking. The oil being delivered these days seldom plugs nozzles if it is properly filtered. Experience substantiated factory claims of no plugging.

As a last resort it was suggested that they could not claim that pulsation had been eliminated. But they did claim that, too. The printed claims of the manufacturers were supported by the Traverse City distributor. With the "Volumetric" combustion of the Mark II, pulsation was unknown.

Test Period

Then it was revealed that the unusual furnace, hundreds of them, had been tested in actual home use over a period of about five years. That explained why Harry's Service Center men had no concern about giving the new furnace their full backing.

In August 1958, Harry's men arranged a kick-off dinner and meeting, which was attended by 22 fueloil men representing local dealers.

It was agreed that a fueloil burning campaign would be started at once, with the new Custom Mark II as the center of attraction. Display ads appeared in the local paper. Harry's windows were dressed to attract attention.

Among other prospects, the oil men knew where No. 1 oil was being delivered to operate natural draft type burners or stoves. Even if those burners were operating satisfactorily, they were using the highest priced fuel, and offered more opportunities for the gas people to move in and demonstrate savings. Usually Harry's oilburner men reached them first.

It cannot be said that the introduction of the Custom Mark II created a city wide sensation in this city of 17,000 people. (There are nearly double that number in the trading area.) A heating device does not usually demand that much interest; but to those who had an interest in heating, it was the greatest thing that had happened in a long time.

Fuel Savings

Before the end of the year 40 of the new units had been installed. In the nearby village of Elk Rapids, (Pop. 889) 14 units were placed in operation. Savings on fuel bills up to 1/3 were not uncommon. By the end of August 1959 it is now certain that Harry's Service Center will have moved a total of 113 Mark II units.

There was no mystery when presenting a proposal to a prospect. A scale drawing was submitted with every quotation, showing the proposed location of the furnace, all ducts and registers. After serving their purpose, the drawings were mounted on the large wall of the sales room to show visitors how jobs were handled. The well is rapidly becoming filled.

The cooperation from Iron Fireman factory has been very much in evidence. Carlton Jacobson, district sales manager, is always on hand. Early in April there was a meeting of oil dealers, distributors, builders and heating equipment dealers from northwestern Michigan held at Harry's Service Center. Warren Blanke from Cleveland, marketing manager for Iron Fireman, was the main speaker. In discussing matters of economic interest in Michigan, he stressed the importance of publishing the economy to be effected by the use of fueloil.

If kind words have been written here about a company, a distributor or a product, it has not been the intent to praise any of them, other than to give credit where credit is due. It is nice to know that through a concentrated effort oilheating has been restored to the position it deserves, but it is even more encouraging to realize that the same spirit to win can keep it in first place in many other places.

Fueloil credit Manual

Seattle Group publishes an excellent Volume; makes it available to All

THE OIL FUEL DEALERS Credit Association of Seattle was organized in 1929 and incorporated in 1933. Since its beginning, it has provided a credit exchange for its members within the Seattle area and is considered one of the outstanding trade associations in the Pacific Northwest. Through the efforts of its members the Oil Heat Institute of Washington was formed in 1943.

All must recognize that for the most part a fuel business is seasonal. In some areas of the country, the season may be very short, in others six months or longer. In either event, credit and the granting of credit during the whole year must be viewed from this seasonal aspect. Large quantities of fueloil are delivered over a relatively short period of time. Payments may be in cash, but in most cases extend over a period of many months. Fueloil is a consumable item and cannot be removed after it is used when the customer refuses to pay. It is imperative then that credit managers and credit personnel scrutinize all credit applications carefully and closely watch delinquent accounts.

The Oil Fuel Dealers Association early took the lead in directing industry thinking to internal problems which resulted in the formation of a committee in September, 1957, to study credit and credit granting from the standpoint of an oil fuel dealer.

Members of that first Credit Managers Committee were selected from different areas of the city and were representatives from large and small oil heating dealers. They were:

Joe Moore, Diesel Oil Sales; Elmer Berg, Watson Hall; Kay Cappelletti, Rossoe, Inc.; Violet Clark, Clark Coal; Bob Donnell, Hemphill Oil; Gail Herrmann, Seattle Diesel; Ellen Hoefer, Glendale Oil; Carl Johnson, OHI; Jack Ryan, Martin Fuel; Wilma Schnell, Youngs Fuel; Bernice Sowden, Gilleland Oil.

Joe Moore, Diesel Oil Sales, was selected chairman which position he has held for two years.

Credit departments are important to the well-being of any firm yet their personnel had not been urged to think beyond their office problems. For that reason the following goals were set:

1. To encourage 100% reporting of bad credit risks to the Oil Fuel Dealers Credit Association by all members.

2. To create and encourage industry thinking among credit managers and credit employees.

3. To solve problems of credit (many of which are peculiar to the fueloil industry). For example: An individual's credit status on an intangible item as heating oil after it was used up did not necessarily follow his credit status on a tangible item as a piece of furniture.

These attainable goals were to be reached in the following manner:

1. Members of the Credit Manager Committee were assigned a certain group of dealers and met with each one of their credit managers advising them of these important reasons for sending in reports on bad credit risks:

a. Puts other dealers on guard against delinquent accounts.

Members of the Credit Managers Committee, Oil Fuel Dealers Credit Association, Seattle.
Left to right: Kay Cappelletti, Carl Johnson, Jack Ryan, Gail Herrmann, Joe Moore, Ellen Hoefer, Bob Donnell, Wilma Schnell. Not pictured: Elmer Berg, Violet Clark and Bernice Sowden. This group was organized in 1929.

but it was new as incorporated in an oilburning furnace unit for domestic use. La Roche proceeded to demonstrate what the furnace would do. With the burner operating as it would be under normal operating conditions, he placed a white handkerchief over the vent outlet. After a short time he removed it. There was no sign of smoke, smudge or soot.

Someone looked through a pyrex covered observation port, and remarked that the fire looked very white. Perhaps the handkerchief could tell a different story if it were placed over the vent during the starting cycle, before the firebox was reflecting full heat to keep the flame at peak efficiency.

Clean Flame

The thermostat, which was serving as a switch, was used to stop the fire. After an extended cooling period, the handkerchief was again placed in position to catch that starting puff. The contact was made in the thermostat. The fan producing the induced draft started. After a few seconds the delayed oil valve opened. The clean white flame was instantly visible. There was no puff—not the slightest wisp of smoke. Again the handkerchief was clean.

Actually, it was explained, there was some excess air present during the first few seconds of operation, but after that the combustion efficiency was higher than is usually considered practical for intermittent domestic burner firing. That white fire did not indicate excess air, but was set at the factory to produce approximately 12% CO_2. Burners can be set before shipment because firing conditions are always constant. Oil pressure, nozzle size, combustion chamber size and the amount of air admitted are all constant factors.

Another question was asked: With such a small vent pipe, is it necessary to have a steep upward pitch to insure proper disposal of gasses? The question had been anticipated, for immediately a long, many jointed piece of three inch pipe was connected to the vent discharge connection. The pipe had more ups and downs than an elevator operator. To those familiar with the operation of an induced draft fan, it was no mystery; but to the homeowner who had seen struggles with natural draft it was a revelation.

It was made clear how problems of excess draft, inadequate draft and varying draft were eliminated. Then came the $64 question. What about service? How do you prevent nozzle plugging? The smallest furnace used a .75 gph nozzle. There was a special combustion head to work in conjunction with that nozzle. The parts involved were located in a manner which caused the cold incoming air to pass over the nozzle while the burner was in operation, and the nozzle was shielded from reflected heat after each shut-down. Nozzles seldom exceed room temperature; therefore, no coking. The oil being delivered these days seldom plugs nozzles if it is properly filtered. Experience substantiated factory claims of no plugging.

As a last resort it was suggested that they could not claim that pulsation had been eliminated. But they did claim that, too. The printed claims of the manufacturers were supported by the Traverse City distributor. With the "Volumetric" combustion of the Mark II, pulsation was unknown.

Test Period

Then it was revealed that the unusual furnace, hundreds of them, had been tested in actual home use over a period of about five years. That explained why Harry's Service Center men had no concern about giving the new furnace their full backing.

In August 1958, Harry's men arranged a kick-off dinner and meeting, which was attended by 22 fueloil men representing local dealers.

It was agreed that a fueloil burning campaign would be started at once, with the new Custom Mark II as the center of attraction. Display ads appeared in the local paper. Harry's windows were dressed to attract attention.

Among other prospects, the oil men knew where No. 1 oil was being delivered to operate natural draft type burners or stoves. Even if those burners were operating satisfactorily, they were using the highest priced fuel, and offered more opportunities for the gas people to move in and demonstrate savings. Usually Harry's oilburner men reached them first.

It cannot be said that the introduction of the Custom Mark II created a city wide sensation in this city of 17,000 people. (There are nearly double that number in the trading area.) A heating device does not usually demand that much interest; but to those who had an interest in heating, it was the greatest thing that had happened in a long time.

Fuel Savings

Before the end of the year 40 of the new units had been installed. In the nearby village of Elk Rapids, (Pop. 889) 14 units were placed in operation. Savings on fuel bills up to 1/3 were not uncommon. By the end of August 1959 it is now certain that Harry's Service Center will have moved a total of 113 Mark II units.

There was no mystery when presenting a proposal to a prospect. A scale drawing was submitted with every quotation, showing the proposed location of the furnace, all ducts and registers. After serving their purpose, the drawings were mounted on the large wall of the sales room to show visitors how jobs were handled. The well is rapidly becoming filled.

The cooperation from Iron Fireman factory has been very much in evidence. Carlton Jacobson, district sales manager, is always on hand. Early in April there was a meeting of oil dealers, distributors, builders and heating equipment dealers from northwestern Michigan held at Harry's Service Center. Warren Blanke from Cleveland, marketing manager for Iron Fireman, was the main speaker. In discussing matters of economic interest in Michigan, he stressed the importance of publishing the economy to be effected by the use of fueloil.

If kind words have been written here about a company, a distributor or a product, it has not been the intent to praise any of them, other than to give credit where credit is due. It is nice to know that through a concentrated effort oilheating has been restored to the position it deserves, but it is even more encouraging to realize that the same spirit to win can keep it in first place in many other places.

Fueloil credit Manual

Seattle Group publishes an excellent Volume: makes it available to All

THE OIL FUEL DEALERS Credit Association of Seattle was organized in 1929 and incorporated in 1933. Since its beginning, it has provided a credit exchange for its members within the Seattle area and is considered one of the outstanding trade associations in the Pacific Northwest. Through the efforts of its members the Oil Heat Institute of Washington was formed in 1943.

All must recognize that for the most part a fuel business is seasonal. In some areas of the country, the season may be very short, in others six months or longer. In either event, credit and the granting of credit during the whole year must be viewed from this seasonal aspect. Large quantities of fueloil are delivered over a relatively short period of time. Payments may be in cash, but in most cases extend over a period of many months. Fueloil is a consumable item and cannot be removed after it is used when the customer refuses to pay. It is imperative then that credit managers and credit personnel scrutinize all credit applications carefully and closely watch delinquent accounts.

The Oil Fuel Dealers Association early took the lead in directing industry thinking to internal problems which resulted in the formation of a committee in September, 1957, to study credit and credit granting from the standpoint of an oil fuel dealer.

Members of that first Credit Managers Committee were selected from different areas of the city and were representatives from large and small oil heating dealers. They were:

Joe Moore, Diesel Oil Sales; Elmer Berg, Watson Hall; Kay Cappelletti, Rossoe, Inc.; Violet Clark, Clark Coal; Bob Donnell, Hemphill Oil; Gail Herrmann, Seattle Diesel; Ellen Hoefer, Glendale Oil; Carl Johnson, OHI; Jack Ryan, Martin Fuel; Wilma Schnell, Youngs Fuel; Bernice Sowden, Gilleland Oil.

Joe Moore, Diesel Oil Sales, was selected chairman which position he has held for two years.

Credit departments are important to the well-being of any firm yet their personnel had not been urged to think beyond their office problems. For that reason the following goals were set:

1. To encourage 100% reporting of bad credit risks to the Oil Fuel Dealers Credit Association by all members.

2. To create and encourage industry thinking among credit managers and credit employees.

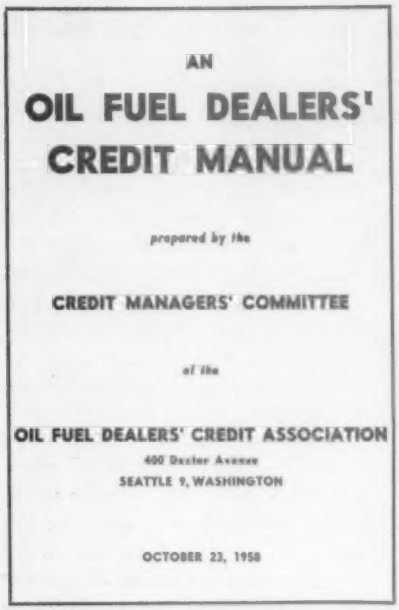
3. To solve problems of credit (many of which are peculiar to the fueloil industry). For example: An individual's credit status on an intangible item as heating oil after it was used up did not necessarily follow his credit status on a tangible item as a piece of furniture.

These attainable goals were to be reached in the following manner:

1. Members of the Credit Manager Committee were assigned a certain group of dealers and met with each one of their credit managers advising them of these important reasons for sending in reports on bad credit risks:

a. Puts other dealers on guard against delinquent accounts.

Members of the Credit Managers Committee, Oil Fuel Dealers Credit Association, Seattle.
Left to right: Kay Cappelletti, Carl Johnson, Jack Ryan, Gail Herrmann, Joe Moore, Ellen Hoefer, Bob Donnell, Wilma Schnell. Not pictured: Elmer Berg, Violet Clark and Bernice Sowden. This group was organized in 1929.


AN

OIL FUEL DEALERS'

CREDIT MANUAL

prepared by the

CREDIT MANAGERS' COMMITTEE

of the

OIL FUEL DEALERS' CREDIT ASSOCIATION

400 Dexter Avenue

SEATTLE 9, WASHINGTON

OCTOBER 23, 1958

Title page of credit manual prepared by Seattle group and offered for $2 a copy to any interested Chapter or individual fueloil dealer.

b. Encourages customers to make arrangements with their regular fuel dealer before buying a new supply of oil.

c. Will reduce bad credit losses.

d. All members will benefit when all report on a consistent basis.

e. Will reduce costs of checking with other credit agencies if file is complete.

f. The procedure of handling the reporting card is not difficult.

g. Experience has shown that time spent on reporting is not time wasted.

2. Additional informative meetings were planned for the future to cement relations between the credit managers of various firms.

3. Periodic bulletins on credit were to be sent from the Oil Fuel Dealer Association office.

Prepare a Manual

The decision was made in early 1958 to prepare a credit manual. As far as can be determined, this publication was the first of its kind in the oilheating business.

Many sessions followed, first to review the material gathered from recognized sources, second to glean from the experiences of knowledgable people in the field of oil heat credit control. The committee then prepared and assembled a manual that would be interestingly written for the new credit office personnel to read and yet serve as a source of technical information for the credit manager. Throughout the book—"Gems" of common sense are inserted. For example:

Common Sense

"A fuel dealer who delivers oil to every customer, without consideration of the reliability of the customer's credit will soon be the invited guest at his own bankruptcy proceedings. In these days of competition and advanced business methods, industry realizes that only when accounts receivable are paid, may profits be computed."

"An account properly opened is 50% collected."

"There is no 'royal road' to collections. Success is the result of hard work."

"Ninety per cent of the habitual slow-pay accounts on the books are caused by laxity in enforcing prompt payment."

"Poor information, not poor judgment, is the cause of most credit losses."

The manual begins with a definition of terms commonly used in the credit profession. Standard definitions were checked and simplified. Here are just a few examples.

Age Analysis—The process of going through all accounts, separating customers who are owing only for current balances and those who still owe on balances for 30, 60, 90, 120 days, etc.

Credit Control — Setting credit limits on each account and following a proper follow-up procedure to make certain that the customer does not exceed these limits.

Net Worth—As applied to retail credit—what a person owns, in excess of what he owes.

A credit manager may have to resort to court action or be affected by a court decision involving one of his accounts. For that reason the Manual includes definitions of legal terms usually found in items of public record. For example, administrator, attachment, injunction, writ, etc. are defined in simple terms to be readily understood by the beginner in credit.

Other chapters cover:

Opening the Account including examples of application for credit.

The method of reporting to a credit association.

Evaluation of a credit applicant.

> Can he pay, will he pay, can he be made to pay—are basic questions to ask when reviewing an application. The Manual lists points that will help in giving the answers.

Methods of accepting and rejecting accounts are important. The Manual tells the reader how.

> Examples of form letters are included.

Collections—Procedures and Methods are covered. A novel way of explaining the use of one of the methods lists the recommendation, then its advantages and disadvantages.

For example:

Personal Contact

Recommendation—Use tact and diplomacy. Discuss problems with the individual involved. Sales personnel may be used for contact.

Advantage — Face to face contact. Allows for discussion of the account and demands immediate response. Determines customer's attitude toward payment of the bill. Home environment and living conditions can be determined.

Disadvantage—Time consuming.

Legal proceedings to enforce payment of debts are listed.

Collection information on persons in particular types of employment. This may vary by state and community.

Skip tracing and avoiding bad debts.

Space is allowed for additional notes for the convenience of the credit manager.

The booklet is in looseleaf form and is made of heavy paper to withstand a lot of usage.

Credit manuals are available in single copies or bulk at $2 per copy plus postage. Firms or OHI Chapters may place their orders with OHI of Washington, 400 Dexter Avenue, Seattle, Washington. Attention — Carl R. Johnson.

How successful are You?

It's relatively easy to check Yourself against Charts and see at a Glance

by Paul J. Spiewak

IN ORDER to make a measurement, we have to compare it against some known quantity or standard. There are innumerable types of yardsticks to measure business success, but every one of them is based primarily on what other businesses have done and are doing. This magazine, for example, goes to a great deal of effort and expense every year to develop an up-to-date industry standard. While these figures are extremely helpful, they can only reveal where you stand in relation to your competitors.

Your business is not exactly the same as an average of the industry. Customers, routes, tank sizes, equipment, and personnel are all different. Why then should your profit be the same? Obviously, you would be in a much better position to judge if you could develop your own standard.

Developing a standard is not as difficult as it sounds, once certain principles are clear. For example, let us take two companies with identical volume:

Company	A	B
Gallon Sales	1,000,000	1,000,000
Sales	$140,000	$140,000
Net Profit	$ 10,000	$ 8,000

On the face of it, Company A is doing the better job. There is another side of the coin, however, so let's draw another comparison:

Company	A	B
Sales	$140,000	$140,000
Investment	$ 30,000	$ 20,000
Net Profit	$ 10,000	$ 8,000
Return on Investment	33 1/3%	40%

On this basis Company B is in the better position. Going one step further, suppose Company A borrowed $10,000 for working capital at 10% interest. In effect, their investment has been reduced by $10,000 and their expenses have been raised by $1,000 per year. The comparison, however, now looks like this:

Company	A	B
Sales	$140,000	$140,000
Investment	$ 20,000	$ 20,000
Net Profit	$ 9,000	$ 8,000
Return on Investment	45%	40%

The purpose of this overly simplified illustration is to demonstrate that return on sales is a better basis of comparison. The amount of capital invested can be increased, for the most part, much more easily than sales can be increased. The business man with the sales has the elbow room to work and all the juggling of numbers in the world can't increase sales. Any good businessman naturally tries to make the maximum profit on the minimum investment, but all other things being equal, the man with the best return on sales is the most successful.

Keeping in mind that profit is basically what you have left over from sales after deducting profits, take out your last Profit and Loss Statement. Look at the bottom line. This figure is what you have left over after deducting your expenses. Is it enough? Should you have had a larger amount left over after profit? How do you know? What are you comparing it against? In essence, what is your standard of measurement?

Most businesses compare item by item with the previous statement. Why? Was this item too much? If the older statement's figure was off, what good is the comparison? Were conditions the same last year, last quarter, or even last month? You should realize that when you compare one year's statement against an older statement, you are using the older statement as your standard. If last year was bad, this year looks good and vice versa.

Many accountants attempt to overcome this comparison shortcoming by listing each item as a percentage of gross sales. This is a step in the right direction, and has some support from the government on tax returns, where certain items are deductible up to a fixed percentage of sales. The procedure has a big shortcoming, just the same. All expenses do not change in the same ratio to business volume.

If your rent is $3,000 and you are doing $100,000 worth of business it amounts to 3%. If you increase your business to $150,000 without moving, it drops to 2%. On the other hand, one person getting a salary of $4,000 a year may be able to handle your office when you are doing $100,000, but when you increase it to $150,000 you may have to put another person on at $3,000 a year, and your office salary expense jumps from 4% to 4.7%.

The amount of capital invested in a business depends on many things, some of which can be controlled and others which cannot. It is a very natural thing for a businessman to pull out as much capital as he considers safe and wise. Once this is done, and the amount of capital is established, any standard must be related to sales. Once sales become the basic yardstick, the Profit and Loss Statement becomes the source of comparison information.

What we need is a better method of comparison. The Profit and Loss Chart serves this purpose. It does a wonderful job in several ways. By converting the information into a graph or chart you get an overall impression at one glance without being confused by lists of figures. Secondly, it compares a large number of statements at one time. The accompanying Profit and Loss Chart was constructed from the data in the following Table:

Period Ending	Sales	Expenses
9/58	$102,000	$ 93,000
6/58	98,000	95,000
3/58	117,000	102,000
12/57	105,000	98,000
9/57	81,000	77,000
6/57	80,000	76,000
3/57	89,000	86,000
12/56	83,000	79,000

Note how much clearer the infor-

You're in business to make money—no question about it, but are you making enough? If your profit is fairly regular and consistent, maybe you haven't thought very much about whether the actual dollar profit is what it should be for your volume of business or for your particular fueloil-oilheating dealership.

mation is on the chart, as compared with the table. The interval between statements is not too important although there should be the same interval between the statements used. If you use yearly statements, use only yearly statements and use at least five of them. Similarly, if you use quarterly statements use only quarterly statements and use at least eight of them. If you get monthly statements, twelve of them should be adequate.

In the construction of the chart, you will note several things. The points are marked in without regard to time. The only two things affecting the location of any individual point is the amount of sales and the amount of expenses for the period. The space between any individual point and the 45 degree line drawn across the whole chart represents the amount of profit for that period, when the point is below the line. If the point goes above the line, the distance above represents the amount of loss. There is a line drawn which roughly connects the points. This line is the best estimate of one which tries to connect all of them. It is called the trend line, and for the business which supplied the information for the table, it shows a profit trend.

Predicts and Checks

The chart is useful in two ways. First as a predictor and then as a check. Suppose that this company, whose Profit and Loss Chart we have, estimates at the end of September 1958 that their business has increased about 14% over the previous year. For the quarter ending December 1958, they should have done about $120,000 worth of business. According to the chart, their expenses should run approximately $108,000. On the other hand, suppose something drastic took place and business was down, or expected to be down 35%. If they could hold the profit trend, they would break even on sales of $67,000. It has often been said that one of the secrets of good management is the ability to reduce expenses rapidly when sales decline and to expand the operation enough when sales climb.

Going back to the chart, suppose that during the last quarter of 1958 the company actually did $120,000 worth of business and expenses ran $111,000. There is an immediate indication that expenses were permitted to run too high, because the point will be located above the trend line. It may be fairly obvious without the chart, because the profit was only $9,000 and $9,000 was made on sales of only $102,000 in the third quarter.

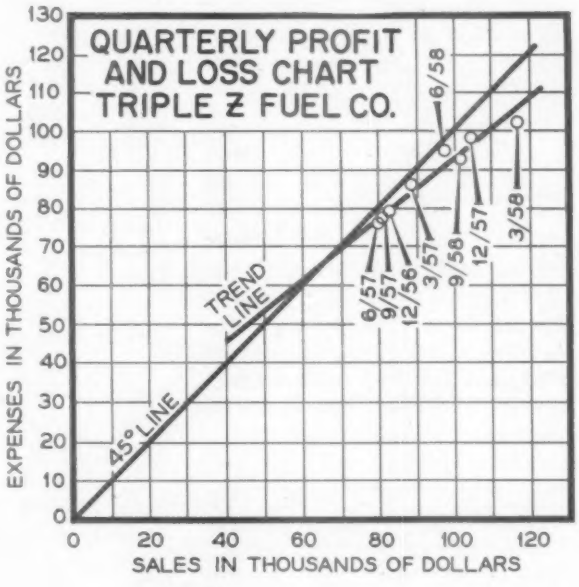
Suppose now that the expenses were $110,000. This is more profit than was ever made before, but it is not enough! You can compare it against the trend line and immediately see that something was not quite right. Perhaps the increase in volume was at the expense of too much overtime. Perhaps the extra advertising did not pay off as well as it should have. Perhaps the same results could have been obtained with less advertising. Perhaps it would have paid to add an additional truck and driver to reduce overtime. As you can see, there may be all sorts of reasons, but you do have the indication that something went wrong.

If you wish to pursue the subject any further, you can draw in trend lines for any category of expense. On the same chart, it is easy to put in points which represent, for example; Cost of Goods Sold, Drivers Salaries, Service Department Expenses, Office Expenses, and Sales Expenses. As a matter of fact, you can even draw separate charts for the Service Department, Installation Department, Fueloil Department, or any other division of the business you might have. This type of detailed breakdown is tremendously useful, because it will show which areas are growing profitably and which are not.

A few years ago, one of our larger universities made charts of this type for their athletic association over many protests that it was a waste of time, since everyone knew that football games with their tremendous attendance supplied the money to run other sporting events. The charts showed a rather different picture, and the following year the school dropped football as a major sport to concentrate on basketball and track meets.

As you use these charts, bear in mind that they are indicators, and subject to variations. They are used as guides to show you when and where you have gone wrong, and to give you a figurative pat on the back when you have done a good job. Note also, that if you improve your systems of operation, if you save money, it must show on the chart. If your systems are not keeping pace with your growth, this will show up also. The only major problem you can encounter is properly drawing the trend lines. If you are confused on this point, any mathematician or statistician can draw them accurately by using the Method of Least Squares, which is described in almost every book on elementary statistics.

These charts are part of the basic tools of good management and better organization. Better organization means better service to your customers, more for the employees of your organization, and most important of all, greater profits in your pocket.



Draft Problems with Oil and Gas

Knowledge of gas-heat draft Hazards makes oil-heat Men appreciate Oilburners more

by John W. Schulz

WITH OILBURNERS involved, chimney-draft problems can be headaches. But with gas burners involved, these problems can be dynamite.

That's the conclusion of an oilheating equipment dealer, which he reached after he had become intimate with the draft troubles of an installation with a gas conversion burner.

This oilburner dealer had tangled with the gas conversion burner job, he explained, only because his brother had asked him to. New in the heating business and located so far away as to give no problems related to sales competition, his brother had gotten into draft trouble which was too difficult for him to solve.

The oilburner dealer was asked to help out with this draft trouble on the gas-heat job, because of his years of experience handling draft problems on oilfired installations. Also, he owned and knew how to use a set of combustion testing instruments.

Brotherly affection, perhaps, had caused the oilburner dealer to refer to his brother as "Little Bill"—before the brother had gone into the business of selling gas heating equipment. But then some of the oilburner dealer's affection for oilheating started showing, for he switched to calling his brother "Big-Bill Gas Heat."

He explains this, "Every time my brother saw me, he gave me tales of woe regarding the big bills for gas for heating, which his customers were always nagging him about. Finally I told him he had become a big boy, and since he was running up a big bill for every one of his gas-heat customers it was appropriate to call him Big Bill.

Here's the sad story which Big Bill had to tell, midway through last heating season, about his gas-heat chimney-draft difficulties.

Big Bill had gotten into a big, ten-room house in which hand-fired coal still served for providing heat. After he had done his best to sell an entirely new furnace, designed for gas, he had to admit failure with that effort. He resigned himself to selling only a gas conversion burner to fire the already installed furnace, designed for coal.

He consoled himself by reasoning that if ever a gas conversion burner had a good chance to do well, it did in this house. The gravity warm-air heating system was the best of its type he had ever seen. For years it had performed beautifully heating every room in the house, with the coal bills pleasingly low. The furnace itself was of giant size; it seemed big enough to heat two houses of the size it served.

Big Bill succeeded in selling the gas conversion burner. Because the owner of the house was wealthy and important, and had a great deal to say locally which everyone listened to, Big Bill installed the gas burner with exceptional thoroughness and care.

Started up last summer for test firing, the gas burner balked just enough to cause its installer to ask a factory representative to take a look at it.

"It's that great, big masonry chimney that goes up through the center of the mansion," the factory man said. "In the living room, the fireplace made of rocks is ten feet wide, and it runs all the way up to the ceiling full width. It's got a flue that Santa Claus can come down. The masonry chimney structure contains that fireplace flue, and three other flues—one for a coal-fired kitchen stove, which is not used—one for the gas water heater—and the flue serving the warm-air furnace, now gas-fired.

"The foundation for the great, big masonry chimney, which you can see in the basement, is about six feet by ten feet, and the whole chimney structure must weigh five tons!

"The thing can't be heated up quickly in summer, weighing that much, by the little stream of hot gases from the gas furnace smokepipe. So the chimney gives no draft at all in summer. In winter, though, it will give draft."

Turning on the new conversion gas burner, the factory engineer proved that, though it balked and gave a hovering and uncertain gas flame for the first ten minutes, after that the big furnace became slightly warm and the gas flame seemed more nearly satisfactory.

The installer, Big Bill, said nothing more was done to improve the operation of the conversion gas burner last summer, because nobody could think of anything else to do.

On the first cold day in fall, he went to the installation to turn on the gas pilot of the burner, which he purposely had left turned off so that he'd be certain to see the equipment the first day it was needed to heat the house. Again, ten minutes of firing the gas burner warmed up the big furnace enough to make the gas flame stop balking and hovering.

For the next two months, everything about the installation seemed satisfactory, perfectly normal.

Owner was puzzled

Then, at the end of October, the owner phoned Big Bill to say he was puzzled over a few things and wondered if they could relate to the operation of the new gas conversion burner. He asked Big Bill to come to the house to see for himself.

The owner pointed out a big clothes closet in a corner of the living room. Located also in a corner of the house itself, this closet was made up of two outside walls, which tended to make it chilly, and two inside walls.

Big Bill's attention was directed to excessive dampness in this closet, which the owner said was something new since the gas-heat equipment had been installed. Clothes and shoes stored in the closet were soggy.

That trip, the contractor succeeded in explaining that the new gas con-

version burner, located far off way down in the basement, could have nothing at all to do with the new trouble of the dampness in the closet.

Things got worse

In another month, he was not doing as well. Things in that closet, and in two other similar closets, now were really wet. In addition, the wallpaper in certain rooms had become damp and was beginning to drop from the walls—the outside walls of the house seemed to be accumulating dampness.

Still later, most of the wallpaper on the cold walls of the house was damp and ready to drop off, the owner said. To top things off, he said, the outer surface of the clapboard exterior was becoming so damp, on the north side of the house, that patches of paint were pealing off it.

By now the owner had talked about his troubles with several friends, including architects and engineers, and had reached the conclusion that the new gas conversion burner was water-soaking the outside walls of his house.

At this stage, Big Bill called in his brother, the oilburner dealer, to investigate and solve the draft problem. The products of combustion from a gas flame contain much water vapor or moisture, Big Bill knew, and if the gas burner were putting excessive moisture into the house it could do this only by putting its products of combustion into the house.

After a quick look-see of the entire house, the oilburner dealer came up with this general idea, "This house has always been sort of damp anyhow. The entire basement shows signs of having been damp since the house was built. An underground spring may be involved. Always on the verge of being intolerably damp, ever since it was built, the house now is getting enough extra dampness or moisture from the gas-burning equipment to make it thoroughly wet."

He quickly proved to Big Bill that all of the products of combustion from the gas burner were escaping into the basement through the draft diverter on the smokepipe of the furnace (the accompanying drawing shows how draft diverters permit this); none of the products of combustion were going up the chimney flue.

The moisture-laden products of combustion from the gas burner "spilled" into the basement from the draft diverter, loading the air in the basement with moisture. Enough of this moisture found its way upstairs and into the outside walls of the building to cause all of the trouble the owner was compaining about.

Two types of draft diverters are shown in the accompanying drawing. The diverter at the right is adjustable; the one at the left is not.

A smokepipe draft diverter serves a gas-fired water heater, a warm-air furnace, or a steam or hot-water heating boiler in two ways which are readily understandable to oilburner men.

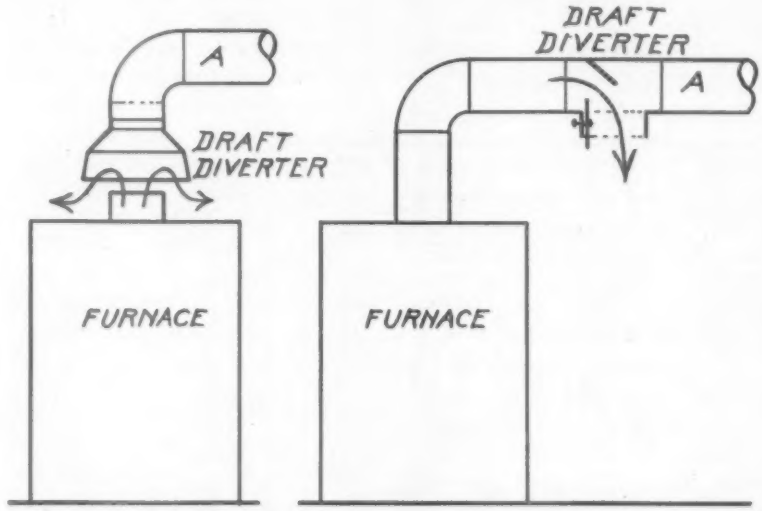
First, with the gas-fired unit in normal operation (the chimney providing draft at points "A" in the drawing), the diverter serves to regulate the chimney draft—much as a barometric draft regulator serves to regulate the smokepipe draft for an oilburner. For gas or oil, excessive smokepipe draft is avoided.

The draft diverter on a gas job, however, in most cases keeps the smoke outlet draft (of the furnaces in the drawing, for examples) from becoming more than a mere trace negative. Apply a usual draft gage to the smoke outlets of such furnaces as are shown in the drawing, and you will not obtain a negative reading as high as even .01″ water.

With a slight chimney draft pulling at locations "A" in the drawing, the draft diverters will almost "kill" the draft on the furnaces With the chimney draft higher, and higher, the draft on the furnaces will not increase. (The stack effect of the furnaces themselves causes hot products of combustion to rise up steadily through the furnaces, and causes the air needed for combustion to flow to the gas flames through air intakes at the bottoms of the furnaces.)

Thus the first function of a draft diverter on a gas job is to regulate the unit's smoke-outlet draft by preventing it from becoming excessive when the chimney draft becomes excessive.

The second function of a smokepipe draft diverter, although easily understood by oilburner men, is something of an eyebrow raiser for oilburner men who never heard of it



Typical gas house-heating furnaces and boilers don't use barometric smokepipe draft regulators, but use draft diverters instead. A diverter serves two functions. As the text of the article explains, one of these raises the eyebrows of oilburner men. Not shown, but inside the diverter on the left is a disc which prevents a blast of air from "A" (caused by a bad downdraft in the chimney) from blowing into the smoke-outlet opening in the top of the furnace. Permitting basement air to be sucked into a chimney that's providing a negative draft as it should, a diverter tends to keep a chimney cooler than it would be otherwise—with the gas burner operating or idle. As a cool chimney gives little draft, this may have contributed to the water-soaked house difficulty described in the article.

before—for this function leads to equipment performance which no oilburner man would want on his installations!

This second function of the draft diverter is to permit all of the products of combustion (which really should go up the chimney) to spill out of the diverter, into the equipment room, if these products cannot go up the chimney flue because this flue has become plugged, or has a downdraft in it. Unable for any reasons to go up the chimney, the products of combustion from the gas flame will spill out of the diverter, as the accompanying drawing shows. For safety, so that the amount of air going to the gas flame will not be decreased with the result that carbon monoxide is formed, while a draft diverter is acting this way (as in the drawing), the smoke-outlet draft of the furnace must not increase appreciably.

To avoid a decrease in the flow of air to the gas flame, which would result in the production of deadly poisonous carbon monoxide, the products of combustion must flow out of a gas-fired furnace as freely when the chimney flue is tight-plugged, or is afflicted with a bad downdraft, as with the chimney working normally and sucking up the products of combustion and discharging them outdoors.

Such spill-over of draft diverters, as is shown in the drawing, is not entirely uncommon. It's the reason many oilburner men declare that oil heat provides dry homes, whereas gas heat in many instances causes homes to be damp. Dampness in gas-heated homes, the result of draft diverter spill-over, shows up as moisture deposited on window glass during cold weather.

Certain florists declare their customers have trouble with indoor plants dying in gas-heated homes, whereas these plants thrive in oilheated homes. Where that's a trouble, spill-over again is largely to blame. Out of this comes the horrible thought that whereas plants cannot survive in the room air that contains appreciable amounts of products of combustion from a gas flame (these products of combustion may contain traces of carbon monoxide, as well as traces of unburned hydrocarbons), human beings may survive breathing in air containing products of gas combustion—but these human beings may be somewhat sickly through their gas-heated heating seasons without ever suspecting why. On that basis, oil heat is indeed a healthy heat!

In the realm of oilburners, products of combustion never are directed inside the interior of a home—not even when a chimney flue becomes tight-plugged—and even though oilburner products of combustion do not include carbon monoxide. Even improperly adjusted, or starved for air, an oil-

(*Please turn to page* 120)

Drying out the Air

Comfort isn't dependent on Temperature alone—Moisture must be controlled too.

By J. R. Lewis

MOST PEOPLE understand that a cooling coil removes moisture from air in the same manner that an iced beverage glass gets moisture beads on the outside in warm or damp weather. Then they make the mistake of assuming that air cooilng units automatically will provide lower room humidity conditions simply because any amount of moisture removal will be bound to mean "relief."

The facts will show that such is not the case. TABLE I contains figures from a psychrometric chart to help in understanding what can, and does occur.

The temperature outside may be 80° and the humidity may be 85%. Moisture in this air is concentrated at 132 grains per pound, but with only 80° weather there is very little sensible heat cooling required to bring the room air to a comfortable 75° condition. Air entering the room at 70° will probably be cool enough to take care of the temperature requirements.

Remember, however, that whenever a cooling coil removes moisture, it will discharge air that is saturated at the low temperature condition. In this example, and from TABLE I, the air will contain 110 grains of moisture at 70° and saturation. The removal rate from 130 to 110 grains means that water will be collecting on the coil and falling to drain at the rate of 20 grains per pound of air circulated.

Then note from TABLE I that air at 75° and 110 grains has a relative humidity of about 85%. There has been no improvement.

Suppose it is assumed that 75° and 55% will be a most desirable room condition. This means that room air should contain about 73 grains per pound. It also means that air from the saturated coil will be at a temperature between 55° and 60°. At this low temperature, the supply air from the cooling coil will satisfy the room sensible cooling needs long before the required amount of dehumidification has been accomplished. There either will be over-cooling or insufficient moisture removal, either of which result in that personal sensation best described as "cold and clammy."

It is a well-known fact that many owners of residential airconditioners are surprised to learn that the equipment is not capable of reducing humidity at those times when excessive dampness is the biggest airconditioning problem. Naturally, it is difficult for the layman to understand why a machine that provides dehumidification in hot weather will not provide equal relief when outdoor humidity is a lot worse.

To understand what happens, it is important to go back to a few of the fundamentals graphically illustrated on a psychrometric chart. With cool refrigerant in a coil and warm air passing over the coil, air temperature

TABLE I

	PERCENT									
Dry Bulb	100	95	90	85	80	75	70	65	60	55
85°	185	176	167	157	148	139	130	120	111	102
80°	155	147	140	132	124	116	108	101	93	85
75°	132	126	120	112	106	99	93	86	79	73
70°	110	105	99	94	88	83	77	72	66	61
65°	92	88	83	78	74	69	65	60	55	51
60°	76	72	68	65	61	57	53	49	46	42
55°	64	61	58	54	51	48	45	42	38	35

These tabulated figures show the weight of moisture contained in one pound of dry air for various dry bulb conditions, and for different relative humidity conditions. Weight shown is expressed in grains. There are 7,000 grains in 1 pound.

is reduced from room conditions to the dewpoint temperature or temperature at which moisture first forms on the cold surface. All of the cooling done up to this point is sensible heat removal. Any further cooling must be a combination of sensible and latent heat but the big portion of the cooling is latent.

For example, at an assumed condition of 60° saturated air which is to be reduced to 55° and for an air quantity of 1,000 cfm:

The latent heat load is 8,700 Btu/hr.

The sensible heat load is 5,400 Btu/hr.

In damp weather the average air cooling system will quickly take care of the sensible heat and the thermostat becomes satisfied either before any or before enough of the latent heat is removed by the cooling coil.

If the thermostat setting is reduced, the result may be worse from the comfort angle because there is not enough sensible heat gain to the conditioned rooms to bring the air dry bulb temperature high enough so that the relative humidity will be reduced by a desirable amount.

If the airconditioning equipment is designed and built to operate at normal low temperature, the operation will provide for a greater potential latent heat removal. However, there then can be objectionable cold drafts at air outlets and there then may be short cycling of the compressor, both of which will interfere with good comfort conditions in the occupied spaces.

On a problem as complex as this one, there are several possible partial solutions and several precautions to guide the installer. The best solution probably still is in the test laboratory not quite ready for wide-spread use.

In any event, the first precaution is to see that clothes dryers, dishwashers or any similar source of appreciable moisture are either vented or prevented from making a bad moisture condition even worse. Bear in mind that appreciable quantities of moisture are given off by appliances of this type.

A further precaution is the use of dehumidification equipment for areas which are enclosed but not necessarily a part of the space served by the conditioning system. Basement or utility rooms usually are first on this list.

The last step is the use of reheat so that full compressor capacity may be utilized to over-cool and to properly reduce moisture content of the recirculated air. Then the reheat is useful to offset the lack of (outdoor) sensible heat load which would have helped to keep the refrigeration running without over-cooling in order to accomplish necessary moisture removal. This method, properly applied, is fool-proof and dependable but it is costly from the standpoint of operating expense.

Dehumidification equipment mentioned as being useful for damp enclosures such as game rooms and basements may be of two different types. One employs a refrigeration compressor, air-cooled condenser and cooling coil assembly, plus a room air recirculating fan.

The illustration shows components for a typical 1/8th hp unit of the refrigeration type. These units are also available with 1/6th h.p and 1/5th hp compressors. They are designed for, and should be used in, spaces that are not well ventilated and under these conditions, the 1/8 hp unit can be expected to serve volumes up to 8,000 cubic feet. The 1/5 hp unit can be expected to serve as much as 12,000 cubic feet. When used in smaller enclosures, the maximum relative humidity maintained will be lower.

It is important to recognize that if any automatic control is used, it should be a humidity control. Also, if these units are in a cool temperature, then the evaporator coil temperature may go below 32° and there will be frost accumulation on the fins. This reduces air flow over the coil and the frost condition quickly gets worse.

The basic design for this type of equipment assumes that air temperature will be 65° or more. If the homeowner has to use this equipment in a cooler space, some consideration should be given to an electric heating element for the intake air big enough to raise air temperature to 70° minimum. Others have used a thermostat element on the evaporator coil to discontinue compressor operation temporarily when frost begins to form. Others have tried a time clock that will disconnect the compressor temporarily. These complications, however, can be a service or maintenance headache and, generally speaking, it is best to avoid using this type of equipment when temperatures below 70° are expected for more than a very temporary condition.

Limitation

There is another important limitation on the use of this type of equipment. The cooling coil is an effective dehumidifier when dew point temperature is relatively high. The cooling coil is inefficient when the dew point temperature is relatively low. In other words, moisture removal capacity is high when temperature and relative humidity are high. The moisture removal capacity reduces rapidly as either the temperature or the relative humidity are reduced.

Generally speaking, it is never possible to get less than 50% relative humidity and it is frequently difficult to get down to 50% relative humidity with refrigeration type package dehumidifying units.

Another type of moisture removing equipment that is not new in design or in buyer acceptance, but which has not yet become as popular as previously discussed equipment, is the

adsorption type of unit. There are several makes and many models and sizes to meet the needs for this type of airconditioning. In fact, it is becoming common to add a unit of this type after a user of residential conditioning finds that his system is shy on latent heat removal when this is the important conditioning load.

The principle on which the adsorption system works is that the moisture removing desicant (which usually is silica gel) has the ability to remove and withhold moisture when in the presence of moist air. There is no decomposition or dissolving of the desicant. However, after it contains a reasonably quantity of moisture a separate air circuit takes heated (dry) air through the desicant bed. This removes the moisture from the desicant. Naturally, it is necessary to dispose of this warm moist air to any remote point. After only a short regenerating cycle, the desicant is ready to start another moisture removal cycle.

For larger sized installations, there usually are two beds of drying material so that one is recirculating room air and removing moisture from the room while the other is being fed outdoor air that is heated so that moisture contained in the bed may be disposed of to the outside.

A compact, single bed, residential type dehumidifier with humidistat appears in the accompanying illustration. The advantages over refrigeration are that room temperature can be below 70° without greatly decreased efficiency. Also, when properly engineered, it is practical to get well below 40% relative humidity and even below 20% relative humidity for special commercial usage.

With this type of equipment you must remember that the refrigeration dehumidifier will dispose of all condenser heat to the surroundings. Since this is greater than the compressor cooling capacity, room temperature will be higher while relative humidity is reduced.

Also, for the adsorption units, all latent heat removed is converted to sensible heat at the desicant bed, and air discharge temperature is well above the air intake temperature, depending upon the rate at which air circulates and moisture is removed. For some commercial applications, it is customary to use an after cooler (cold water or refrigeration) to offset the high discharge temperature.

One further point on which there is still lively discussion at technical levels has to do with the question of continuous versus intermittent blower operation on partial residential cooling loads. Those who advocate blower shut down feel that there is too much moisture on a cooling coil when compressor is stopped by the thermostat. They say that the unit simply returns an unnecessary amount of moisture to the conditioned rooms, since air motion and even slightly increased air temperature, tends to dry the coil instead of permitting water to drain.

Need Ventilation

Others, who at the moment seem to be in the majority, have contended that any disadvantage is more than offset by discomfort caused by stale air when blower does not operate and there is no ventilation.

It would seem that there is much in favor of both arguments, and for any given set of conditions, such as climate, cooling capacity or occupancy, the best solution may be either continuous blower or some type of cycling. It also may be that partial shutdown for only a few moments after compressor cuts off will allow excess moisture to drip off the coil.

It can be a foregone conclusion, however, that new residential airconditioning systems must pay more attention to moisture conditioning. Depending upon the climate, the most important phase could be adding moisture in winter. There are many who need this type of moisture protection for health, furnishings and the structure itself. In different parts of the country, the excessive moisture problem can be even more serious.

In any event, modern airconditioning equipment is available and proper installation procedure will solve the problem.

Left: Hermetic type F-12 compressor is at top of picture with finned air-cooled condenser in the center. Housing below condenser contains motor-driven propeller which draws air through the bottom of the unit and discharges upward over the compressor. The cooling coil which collects moisture is at the bottom of the illustration. Moisture falls to a trough or collecting basket where it may be piped to a drain for disposal.

Right: Smallest of several sizes of Dryomatic residential adsorption dehumidifiers. For about 2½ hours a blower draws room air through a filter and then passes it over a dehydrating agent which withholds moisture in the air without dissolving the agent. At the end of the cycle the same blower draws air through a 900 watt heater, then through the agent and finally through a vent outside the structure. After about 30 minutes the agent is dry and ready to remove more moisture. Built-in controls automatically reverse the cycle, connect or disconnect the air heater.

Standard of Indiana announces burner Service in selected Spots

THE JUNE 16 ISSUES of the leading newspapers in Chicago carried full page advertisements announcing that Standard Oil Co. (Indiana) was now offering a high grade burner service to its oilheating customers and prospects. The complete annual service including parts, also 275 gallon tanks, sells for $38.95. Another plan covers only the annual overhaul at $18.95. For call-in service the rate is $7.60 for the first hour, $1.90 each additional quarter hour.

Simultaneously the company announced service plans in Fargo, North Dakota, and in Duluth, Minnesota. In Fargo the complete contract costs $35.95 including parts but not tanks. Another plan provides annual cleanup plus any emergency service, but no parts, and sells for $17.95.

Duluth gets the annual cleanup plus emergency service but no parts, and pays $14.95. This market also lists call-in service without contract at $5.50 for the first hour, $1.35 for each additional quarter hour.

The company also inaugurated free service in Omaha, to match the practices of that market. A few additional Midwest markets are getting service plans of one type or other, tailored to fit local conditions, labor costs and customer habits. It is planned to add more cities to the program as the testing period through this season discloses the strong and weak features.

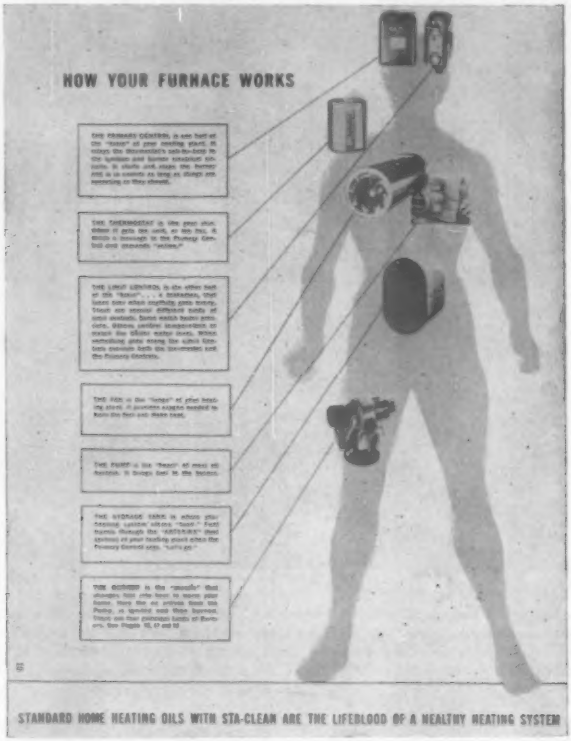
The Company also announced on June 16 for Michigan only that its monthly budget plan for fueloil users will henceforth include insurance, not only for life coverage, but also health and accident. The life feature is carried by Michigan Life Co., and the other phases by Continental Casualty Co. If the Michigan experience is good this will be extended to other areas.

A number of Midwest markets have had inadequate burner service because too few oil companies rendered mechanical service and the general heating trade was not seriously interested in 24-hour responsibility. Oilheating has been handicapped particularly in the smaller cities.

Now we have the largest major oil company of the region accepting service responsibility which should have a salutary effect on the market as a whole. "Indiana" deserves credit for this forthright approach . . . *Editor*

A Guide to
HOME-HEATING
COMFORT
STANDARD
STANDARD OIL COMPANY
A handbook of useful suggestions to help you get more pleasure from wonderful oil heat!

The Company has also issued a new consumer booklet, "to help you get more pleasure from wonderful oil heat." Typical chapters cover "Get Cleaner, More dependable Heat" . . . "How to Slash Peak Month Bills" . . . "What's a Degree-Day?" . . . "14 Ways to Save Heating Dollars" . . .



"How Your Furnace Works" (see above, right) . . . "What to do if Heat Is Interrupted" . . . "The Real Economy of Oil Heat" . . . "How Outside and Inside Temperatures affect Oil Consumption," plus sections on burner types, controls, tank capacities and the like.

STANDARD OIL COMPANY
OIL BURNER SERVICE AGREEMENT

_____
_____
_____ } BUYER

This agreement made in triplicate between Buyer and . . .

STANDARD OIL COMPANY
20 North Wacker Drive
Chicago 80, Illinois
Home Heating Customer Service
Phone: ANdover 3-6279

MAKE OF BURNER	CUSTOMER'S ACCOUNT NO.

☐ Plan "A"—Burner Service and Parts . . $38.95

Inspection . . One complete inspection of your oil burner, adjust for peak efficiency, vacuum clean when necessary. Warm and cold air ducts not included.

Parts Protection . . Repair or replacement of integral burner parts, at no additional cost.

Service . . Prompt emergency service as may be required during the Heating Season, at no additional charge.

Under this plan the following parts will be repaired or replaced when needed at no additional charge:

Oil Burner Motor	1—275 Gallon Tank (Except Buried, Vaulted or Enclosed)	Plain Thermostat	Electrodes
Oil Burner Pump	Stack Safety Control	Ignition Wires	Nozzle
Oil Lines (Above Ground)	Fan Coupling	Combustion Air Fan	Nozzle Screen
Transformer	Limit Control	Pump Screen	Oil Line Filter Element
		Low Water Cutoff	Blower Motor

Combustion chambers, hearths, gauges, electrical wiring, circulating water pumps, blowers, humidifiers, parts of furnaces and boilers or other accessories not an integral part of the oil burner or controls are not included.

Pot type and gravity type burners will be serviced on a per call charge basis.

☐ Plan "B"—Burner Clean Up Service . . $18.95

Vacuum clean furnace or boiler, combustion chamber, chimney base and breeching.

Lubrication of burner motor, fan bearings, fan motor and water circulating pumps.

Belt adjustment or replacement *at no extra cost* if needed.

Cleaning or replacement of burner nozzle *at no extra cost.*

Cleaning and adjusting of electrodes.

Check oil burner controls.

Check air filters.

Start up and test entire burner for proper operation.

Pot type and gravity type burners will be serviced on a per call charge basis.

☐ Plan "C"—Emergency Service (Hourly Rate)

$7.60 First Hour — $1.90 additional each quarter hour

Saturday, Sunday, nights and Holidays one and one half times the above rate.

Minimum Service Charge — $7.60

TERMS . . . . ☐ CASH ☐ CREDIT ☐ BUDGET PLAN

The Company reserves the right to reject any agreement if on inspection, burner is found in such condition that service will be unsatisfactory to both parties.

Standard Oil Company, will assume no responsibility and will declare all guarantees null and void if the burner is serviced by anyone not authorized by the Company.

Service will be available day or night during the Heating Season.

The additional provisions printed on the back hereof constitute a part of this agreement.

Accepted:
STANDARD OIL COMPANY
20 North Wacker Drive Chicago 80, Illinois

By: _____

Date: _____

Accepted:

_____ BUYER

Res. Address _____

Phone No. _____

Form 842-K Rev. 5-59

OFFICE COPY

Baltimore Builders discuss Fuels

Survey shows They install Gas in Developments, but use oil Heat in their own Homes

by Tom Carson

RECENTLY, the Oil Heat Association of Maryland, through its Joint Committee on Advertising and Public Relations, employed a local marketing and opinion research analyst to make a survey of the local builder fraternity, seeking the basic reasons for the preference of natural gas in new home construction within the Metropolitan Baltimore area.

The marketing analyst, who conducted this research, found within a very brief period of time, that the opinions of the various builders interrogated were so uniform, he decided that it was useless to continue the work on the scale originally contemplated.

The high points of the survey disclosed virtually nothing which was not already known to our industry. However, the survey confirmed definitely the facts and results which the industry knew to be true.

All Builder Types

The builders contacted comprised virtually all segments of that industry, since some were large concerns constructing goodly numbers of houses of the speculative type, builders of intermediate size having the same objectives, and other builders who specialized in custom built houses.

Condensed, the opinions expressed grouped themselves into the following categories:

1—We find no appreciable resistance from the buying public to the use of natural gas for house heating purposes, since there is very little difference in cost of operation, plus the fact that the public utility gives excellent service and is highly regarded. Also, the local Gas and Electric Company cooperates with the builder in a most excellent fashion, and none of them have complained of delay in construction of gas mains, electric line installation, or on any other score.

2—The original installation of oilheating equipment would cost the builder a minimum of $100 more in the small home, and more than that sum in many cases, since the basic cost has been materially reduced through the use of the Type "B" flue, which flue oil heat cannot use.

3—The Baltimore utility has a practice covered by a tariff filed and approved with the Public Service Commission, which grants a gas main allowance in each property constructed as follows:

If gas used for cooking, allowance	$ 50
If gas used for domestic hot water, allowance	110
If gas used for central heating, allowance	200
Total allowances per house with all Natural Gas	$360

This tariff was introduced by the local public utility and approved by the Public Service Commission in 1949, just a few months ahead of the introduction of natural gas into this area. This heavy scale of allowances did not apply until natural gas was introduced, which is extremely significant.

4—The builder feels that the basement storage tank is objectionable in the eyes of the home purchaser, since it takes up room which can be utilized for other purposes.

Service Lack

5—Several builders commented upon the lack of adequate mechanical and delivery service on the part of the oilheating trade.

All of the foregoing concerned itself with disadvantages on the part of oil heat as compared with natural gas, in the opinion of the builders interviewed. On the other hand, every one of the builders contacted had oil heat in his own home, most of which properties were located in the outlying sections of the city and homes of much larger than average type. Virtually all of the builders stated they would prefer oil in the large type houses because of economy, feeling that the savings would outweight the disadvantages attributed to oil heat. The survey further indicated that a majority of the builders were not interested in installation cost equalization through subsidies, in the shape of advertising allowances or any other subterfuge. There was a feeling among some of them that if all costs were equal, they would be inclined to use oil heat, since they found no particular resistance in the sale of the property whether oil or natural gas was involved.

In any event, in the metropolitan Baltimore Market, natural gas for the past seven years has been installed in approximately 95% of all new home construction. Prior to that time, the conditions were exactly reversed.

Oilheating Problems

The problem confronting the oilheating industry is one that must, should and can be solved. The effect upon the profits of refiners through the loss of this valuable portion of the middle distillate market is becoming more and more apparent. The recent report of the Chase National Bank, published in the February issue of FUEL OIL & OIL HEAT, is singularly indicative of the proof of this statement. Consequently, it certainly seems definitely the truth that all segments of the oilheating trade, from producer to dealer, are being seriously hurt, which should create a supreme desire to make every conceivable effort to remedy this situation as fast as possible.

It seems to the writer that the remedies, which should be instituted, shape up as follows:

New oilheating equipment should be designed which can be installed as economically or for less money than is now the case with gas heating equipment. Also, this equipment should be capable of being used to convert existing gas fired equipment to the use of oil, including the utilization of Type "B" flues. This may seem, at first glance, a bit of wishful thinking. But, in this day and generation, with all the scientific development which is taking

place of a most miraculous nature, it is inconceivable to believe that this task is impossible. If sufficient desire exists and adequate sums appropriated, this ambition should and can be crystallized into actuality. The creation of the Research Sub-Committee on the part of API Fuel Oil Committee is a step in this direction. A sum has been appropriated by API to employ the services of a consultant, whose task is to investigate the situation and make recommendations. The accomplishment of this objective in the design of this dual purpose oilheating equipment will have the effect of not only enabling our industry to compete in the new home market and growth in that direction, but it will enable us to seek recovery of lost business to natural gas through conversion, even with Type "B" Flues involved.

Gas Allowances

The practice of gas main allowances on the part of the public utilities, as typified by that in Baltimore, is one of the most ingenious and at the same time insidious method of securing business. In brief, the practice permits the utility to charge the developer for the gas main, and then refund the theoretic outlay on the part of the builder in return for utilizing gas appliances in each property. This means in substance a reward or sales allowance for the creation of new business for the Utility, and the gas main still remains the property of the Utility.

Several years ago, a group of independent dealers in the Baltimore area consulted an outstanding legal firm in the District of Columbia, and after laying all the facts in the hands of these lawyers, an opinion was given by this outstanding legal firm that in their opinion, this practice could be declared illegal. This law firm recommended that action be brought in the U. S. Federal Court on the ground that this practice of the local utility was in violation of the Sherman Anti-Trust Act, and they further suggested that the oil heat distributors injured through such practice, file suit for damages in addition to the main objective of declaring said practice illegal. The opinion of this law firm further declared that no public utility, regardless of state legislation, is immune to the application of the Sherman Anti-Trust Act.

The local group, after receiving this opinion, naturally inquired as to the cost of bringing such an action in the Federal Court. They were advised that such action should not be taken unless a sizable sum of money was raised, since such a matter would undoubtedly be carried to the Supreme Court regardless of actions taken in the lower Courts. The local group of independents, not being in possession of the necessary funds, were forced to relinquish the project.

All of the foregoing has been cited in the hope that some organization or entity within our Industry, with sufficient desire and funds, might investigate this question with their own legal talent, and if in the opinion of said legal talent Court action seems logical and advisable, then perhaps another barrier in the way of the growth of oilheating might be removed.

The necessity of keeping oilheating prominent in the public eye from every angle is self-apparent, and this phase is being given more recognition and action than any other. One evidence of this is the activity of the newly created National Fueloil Council, Inc. It has been clearly recognized that more money must be spent by the Industry, both refiners and distributors to combat natural gas, than has been the case in past years. It is very gratifying to observe that the National Fueloil Council is at work, and it is sincerely hoped that the goal of the Council for 1959 in promotion and public relations funds of $3,000,000 will be attained.

The whole objective in writing this treatise is to dispel any idea of defeatism among our ranks because of the heavy inroads made by natural gas. If one of the most profitable products of the middle of the barrel is worth promoting, we must be up and doing. There are ways and means to build our business, provided there is sufficient real determination within us. I am in hopes that there is something in this article which may be of help.

HERE'S AN IDEAL OIL CENTENNIAL ACTIVITY

An oil heat Parade is a Natural for local Centennial Observance

An industry Centennial comes once in a lifetime. If oilheating is to get its share of the public attention during the Oil Centennial, you must act in your market.

It is up to you. The high point of the Centennial is Titusville Day, August 27, 1959 (100th anniversary of the day the world's first oil well was drilled). Activities can be conducted between now and August 27 and the Centennial will carry on for the balance of the year into our Fall heating season.

NATIONAL FUELOIL COUNCIL has prepared a Centennial Kit, which contains five public relations pieces. It is designed, of course, to enable local fueloil and oilheating dealers or groups to capitalize on the prestige and publicity that can be secured during the period of the Centennial observance. Reproduced here is the complete outline of how to organize and hold an Oil heat Parade.

The memo guide explains the appropriateness of an Oil heat Parade and then continues with a step-by-step procedure for a Parade chairman or committee to follow.

SURE-FIRE—Few local publicity activities are as sure-fire as a good parade—and an Oil heat Parade is a natural for our industry. It is an appropriate Centennial activity to stir up a lot of fresh interest in and get across good public relations points for oil heat in your town. Such a parade can be a lot of fun—but it also requires planning and work. Use this memo as a guide.

WHY—Fueloil dealers start out with one big advantage in a parade activity. They have the basic necessity for putting on a good parade in the form of

their trucks. (As a supplement to this, the delivery trucks in themselves exemplify oil heat favorably.)

THE CENTENNIAL—First 100 Years of Oil provides a natural occasion for a parade, which should be both a Centennial celebration and an oil and oil heat public relations event in your city.

WHAT TO DO—Here are the basic elements you should get together for a parade:

Floats — Depicting some event or exemplifying some story telling advantages of oil heat and tying in with or mentioning the Centennial; make entertaining.

Trucks—Delivery trucks, shined up and dressed up—with posters, banners, streamers, flowers, etc., but looking like modern, efficient oil trucks (identify with company but do not clutter up with advertising).

Trucks — On which the floats are mounted and ride (in most cases without the tank, or the tank concealed).

Pretty girls—We're sure your town has plenty of these; put them on trucks; march as drum majorettes; elect one queen; have them throw out handbills, etc. to the crowd.

Music—1) your town has bands—kids, grownups—pull several of them into the parade; 2) one or more trucks may carry a public address system with canned music, also some canned announcements or prepared oil heat Centennial messages which you can record and send out on these public address systems (if you want to be professional, get your local radio announcer to be the voice for these).

Other elements — Prizes for best float; queen of parade and other beauty contestants; handbills and other oilheat and Centennial printed material; "oilheat" lollipops, balloons, oilheat (handle-bar) cardboard mustaches; publicity for the parade (see later in this memorandum); bring in as many cooperating and participating groups as possible—oilheat and others.

As far as the eye can see—oil trucks moving down a highway or collected at a rendezvous point. This was the parade sponsored by the Oil Heat Institute of Long Island during Oil Progress Week two years ago.

How—Points to bear in Mind

Usually you need a permit for a parade. Check with your police department about this—also work out a time, routing, police assistance (traffic, etc.) with the proper officials for the day of the parade.

Prepare well in advance and draw up a definite plan covering these points: your theme tying in oil heat with Centennial; number of floats, different presentations on floats (so there are no conflicts); heads of your different committees (floats, music, arrangements with city authorities, prizes, and so on); assign responsibilities and see there is someone tying it all together for the rest to report to.

Give the activity and the group working on it at least two months (longer is better) to shape the whole activity up.

Have good floats. It is better to have fewer floats but all of them interesting and attractive than to have a lot of them. Bring in professionals—designers or your advertising or publicity agency if you can. At least see that those in your association (the "woman's touch" can be good here) who are gifted and interested in this kind of activity are brought into it to get results that will make a fine impression on the viewers.

Remember, in a parade there are many small details—things can go wrong—in lighting (if at night), in sound, in colors or construction. Check everything through, and it may be wise to work out some simple rehearsing a day or two before the parade. At that time call an overall conference and perhaps run a timed and scheduled drive over the route.

Wind up your parade if possible or arrange for a high point—for example, band competition or presentation of the queen to the mayor—at some crowded spot, such as at a reviewing stand, before city hall, fair grounds, etc.

Materials, Ideas, Themes

Queen—Runner-up contests—from company staffs, local schools or surrounding communities.

Float ideas—Oldest company; old timers; old equipment contrasted with modern—floats depicting oil heat's advantages, such as clean, automatic, etc.; historical material—old tank wagon, etc.; hot water equipment, perhaps in action; oil is safe (don't hit other fuels—just bring out this positive point for oil); float representing

service; float representing community importance of oil heat. Be sure to make the floats, etc. clever, human and interesting—not technical.

A specific theme—Use as a basis the overall Centennial theme—it is suggested that this can be combined with an oil heat message as follows:

"100 Years of Oil Progress—Oil Heats America's Homes"

Contests—Here are some (adapt them to your parade activity—or develop others): prize or citation for best float; essay contest on oil heat; band contest; kid orators contest on oil heat subject; best window display; "oil man for a day" contest; best shined, etc. truck; driver or courtesy driving award; serviceman award (or awards).

Miscellaneous ideas—Printed handouts—folders, leaflets, mailing pieces—send out some before parade.

Parade proclamation—ask mayor (or governor) to issue; also work with Chamber of Commerce and individual business action tying in with parade.

Speakers group—organize to go around and give talks in the weeks before the parade (See speech in July issue) talking about oil heat and the Centennial and telling about parade.

Equipment displays — in dealer showrooms and on the floats.

Store or business window displays—Centennial, oilheat and parade material.

When to run . . .

Timing—or day of the parade—will be important. You must decide this locally with regard to other events and your association's schedule, but August 27 (the day the first well came in at Titusville) is a natural date. See that the timing fits in reasonably well with the heating season, in any case.

Publicity and the Parade

The parade is direct publicity in itself. However, interest in it can be heightened by publicity about it and this can also be used to get across favorable points about oil heat itself. You will have to build your publicity campaign and schedule around your own particular parade, but the following will give you a basic list for publicity action—add as many others as you can yourself:

1. Pre-parade announcements (to start to stir up public interest). For example, series of short announcements (several weeks in advance of day) announcing date, route, committee membership, committee meetings.
2. Series of short features on the parade—selection of the queen, construction of floats, pictures in connection with both of the preceding, contests in connection with the parade.
3. Full announcement story with latest details—for publication just before the parade.
4. Full coverage of the parade as it is run off—newspaper, radio, TV and other publicity media should be invited well in advance, be given "canned" release material (facts about the parade—oil heat) and full facilities to carry on their job of coverage.
5. Additional—"slugs" about parade in association or dealer advertisements, interviews of parade personalities by press and on radio or TV; lastly, derive publicity wherever possible from the news which stems from any of the specific action or events you carry on.

See that publicity materials you prepare do an additional public relations job for your local industry by incorporating, wherever you can, two things in this material: 1) favorable and positive data about oil heat—merely using the adjective "modern" at times or dropping in that oil heats over 9,000,000 homes are simple examples (the NFC Fact File has other such data); and 2) tie in the Oil Centennial, what it means to America and its themes with your overall publicity material.

Note: Materials for this activity, both for background data or for distribution, should be secured wherever possible from these industry sources: National Fueloil Council, 424 Madison Ave., New York 17, N. Y. (i.e. NFC Kit and its other publicity materials, such as the booklet, "Facts about Fueloil and home Heating.); Oil-Heat Institute of America, 500 Fifth Ave., New York 36, N. Y.; American Petroleum Institute, 50 West 50th St., New York 20, N. Y.; petroleum companies; national, state or regional organizations active in the oil heat field.

Esso vice-president Robert H. Scholl addressing the Sixth Promotional Conference sponsored by the National Fueloil Council at New York on June 25. The Council now sponsors and assists 45 cooperative advertising campaigns for oil heat in states of the East and Midwest. Some 70 individuals from the campaign cities spent two days studying and discussing each other's advertising and public information activities, took back a lot of good ideas. Scholl was the only outside speaker at the conference, and he told the group how a large refiner looks at promotional doings for fueloil.

Pacific Northwest Programs in 8th Year promoting oil Heat with $411,326 Budget

THE BUDGET for the eighth year of the advertising program of the the Pacific Northwest Regional Advisory Committee for the 1958-60 period totals $411,326, about the same as for the previous year.

The Committee is a group composed of representatives of major oil companies and independent fueloil distributors, working through local chapters, consisting of: OHI of the Inland Empire, OHI of Southern Idaho (which has no budget formulated at this time); OHI of Nevada; OHI of Oregon and OHI of Washington.

Very briefly, the program works in this way. The dealer associations raise money in their areas and the major oil companies match it on an equal basis. Thus, half of the $411,326 was subscribed by the dealers and the other half by the suppliers.

The program is worked out in each market by the association concerned and the activity is conducted on a local level. However, there is a great deal of cooperation between the programs, some areas using the same advertising agency and the same advertising materials.

The Oil Heat Institute of Northern Nevada in presenting its proposed budget for the 1959-60 period explained it was continuing the general program which has been operating for the past three years. The presentation reported some degree of increased competition within the urban areas, "although our direct mail program is having good effect. This year we are planning a specific program targeted to special interest groups, such as architects, builders and real estate firms."

The Oil Heat Institute of Inland Empire proposes with its current budget to implement a five-step program:

1. Continue a well planned, properly supervised and adequately finance advertising program, using television, newspaper, radio and outdoor advertising to establish in the minds of the buying public the numerous advantages of oil heat.

2. Develop a working relationship with the home builders of Spokane.

3. Enable realtors and their salesmen to become acquainted with the advantages of quality heating with oil. (On both points 2 and 3, the association plans to provide sales help to help sell oilheated homes.)

4. Educate builders and realtors to the advantages of selling oilheating.

5. Plan an all-out drive to make heating oil dealers and their suppliers aware of the need to take an active part in selling oilfired installations in the new home market and the important oilburner replacement market.

The Oil Heat Institute of Washington presented its 1959-60 budget "with the express purpose of continuing the objective stated last year —increased sales in the oilheating equipment field, thereby resulting in increased heating oil sales.

"This year we plan to increase the Special Interest emphasis to:

"1. Builders, architects, heating consultants and real estate firms.

"2. To bring those specialty groups into the Oil Heat Institute program as active salesmen for oil heat."

Oil Heat Institute of Inland Empire

OUTDOOR ADVERTISING	
(Showing four areas: Lewiston, Spokane, Wallace-Kellogg, Coeur d'Alene)	$ 6,890
NEWSPAPER ADVERTISING	
(Four areas, total of 465: Lewiston Tribune, Spokane Daily Chronicle, Kellogg Evening News, North Idaho Press, Coeur d'Alene Press)	$ 11,515
TELEVISION	
KXLY-TV, Spokane, covering the whole area	$ 12,800
RADIO	
Four areas, seven stations, approximately 4,800 spots in Lewiston (2 stations), Spokane (3 stations), Wallace-Kellogg and Coeur d'Alene (1 station each)	$ 7,098
SPECIAL PROGRAMS	
Window banners	$ 600
Builder-realtor promotion	2,790
Installer promotion	6,000
Home show	1,500
FIELD PROMOTION	
Tri-City area will use services of field man	$ 3,486
ADMINISTRATION EXPENSE	
Direct supervision costs—pro rata share office personnel time and costs	$ 3,300
MEETINGS AND TRAVEL	$ 1,550
MISCELLANEOUS	
Office supplies, postage, telephone, etc.	$ 921
TOTAL BUDGET	$ 58,450

Oil Heat Institute of Northern Nevada, Inc.

NEWSPAPER ADVERTISING	
Four local newspapers, employing the basic theme of Safety-Economy-Cleanliness-Dependability	$ 1,500
RADIO	
Five local stations sponsoring sports events	$ 1,500
TELEVISION	
One local station at beginning and end of heating season, selected spots preceding and following programs of local interest	$ 1,500
DIRECT MAIL	
Mailings to all residents in the area	$ 750
SPECIAL PROGRAMS	
To promote oilheating with contractors, builders, architects and engineers	$ 500
REGIONAL ADVISORY COMMITTEE MEETINGS	$ 250
TOTAL BUDGET	$ 6,000

OHI of Oregon and Southwestern Washington

OUTDOOR ADVERTISING	
Posters: Six showings alternating every other month for six months out of 12 in Portland, Oregon City, Salem, Corvallis; three in Eugene, Springfield, Vancouver, Hood River, Astoria Bend. Painted bulletin: One in metropolitan Portland	$ 18,696
NEWSPAPER ADVERTISING	
Regular schedules: Approximately two advertisements each month in smaller markets and three in the larger oil heat participating counties; small ad in Sunday Journal Northwest Living Section every Sunday ($25,500)	

Special Sections devoted to oil heat: Repeats in the Vancouver Columbian, Salem Capital Journal, Salem Statesman, plus additional ones in the Eugene Register Guard and Portland Journal ($5,000)

Special New Home Builder Promotions: Selected classified real estate display ads ($4,000) ..... $ 34,500

RADIO

Continuance of oil heat spots adjacent to radio newscasts reporting gas explosions ($4,800)

Builder remotes and interviews, tied in to model home promotions ($4,500)

Newscasts and weather reports ($5,000) ..... $ 14,300

TELEVISION

Newscasts: Continuing twice a week on KBES-TV, Medford; adding KOTI-TV, Klamath Falls and KVAL-TV, Lane County; plus spot schedules for KOIN-TV, KGW-TV and KPTV, Portland ($10,000)

New home promotions: Continuing with live interviews with home builders, plus stepped up spot schedules when new oil heat homes are open to the public ($5,000)

Oil Heat-O-Rama: Successful 1958 contest to be repeated, with extra promotional spots set for KGW-TV, KVAL-TV, KPIC-TV, KBES-TV and KOTI-TV; second oil heat promotion TV station is planned to secure the new installation market ($21,000)

Special TV film production: New TV spot films planned in cooperation with other Northwest OHI's to sell the modern concept and create a better image for oilheating ($2,500) ..... $ 38,500

MAGAZINE

Twelve insertions, 1/3 pages, in Portland Home Builders Monthly, official publication of the Portland Home Builders Association ($400)

Ad series in Oregon Publisher, organ of Oregon Newspaper Publishers to explain economic importance of the oil heat industry and the facts about using this fuel ($200) ..... $ 600

DIRECT MAIL—LITERATURE

New heating oil dealer pieces, statement stuffers, cost comparison folders, fact sheets on new model homes, schools, churches, plus other projects to follow copy approaches pointed out in recent market study ..... $ 3,000

PUBLIC RELATIONS AND PUBLICITY

Continuance of news releases to press, special photography and models for publicity; coverage of all OHI activities; cooperation with editorial personnel; collecting and editing stories for new home sections of newspapers and stepping up of OHI new home builder promotion; special publicity on oil heat promotions, contests, etc., to name but a few of the projects planned ..... $ 8,780

SPECIAL PROGRAMS

Dealer tie-in material: Truck and window decals, bumper strips, mats, stickers and window banners ($1,000)

Employee education: Material and literature to tell employees what their OHI can do and is doing to protect their market ($500)

Equipment dealer material: Window banners, bumper strips, case histories, cost comparison figures, etc. ($1,000)

Special award program: Employee awards to recognize outstanding work, improve morale ($750) . $ 3,250

MISCELLANEOUS AND CONTINGENCIES ..... $ 3,200

TRAVEL AND MEETING EXPENSE ..... $ 1,500

FIELD PROMOTION ..... $ 14,800

ADMINISTRATION ..... $ 4,000

TOTAL BUDGET $145,126

Oil Heat Institute of Washington

OUTDOOR ADVERTISING

27 cities or locations, 76 poster (30-sheet) locations per month ..... $ 38,000

NEWSPAPER ADVERTISING

All areas—32 newspapers, 60 ads per month, an average of 1,800 col. ins. per month ..... $ 26,000

TELEVISION

4 major areas: Seattle, KING-TV, KOMO-TV, KIRO-TV; Tacoma, KTNT-TV; Bellingham, KVOS-TV; Yakima, KIMA-TV ..... $ 42,600

RADIO

In markets not covered directly by major TV outlet; planned in Port Angeles, Auburn, Olympia, Bremerton, with special event coverage in Seattle, Tacoma and certain other areas ..... $ 4,000

DIRECT MAIL

Statement stuffers ($3,500); industry economic brochure ($2,150); press relations materials ($500) $ 6,500

MARKET STUDIES ..... $ 4,000

SPECIAL PROGRAMS

Window banners, newsletters, equipment promotion, builder promotion, exhibits, public relations (consumer manual and technical manual) ..... $ 38,250

FIELD PROMOTION

Field representatives, salary and expense ..... $ 19,600

ADMINISTRATIVE EXPENSE

Direct supervision costs, pro rata share office personnel time and costs ..... $ 17,200

MEETINGS AND TRAVEL

Regional Advisory Committee cost, direct administrative, field travel ..... $ 2,900

MISCELLANEOUS

Advertising materials, shipping, postage, telephone $ 2,700

TOTAL BUDGET $201,750

Composite Budget

MEDIA-PROGRAMS	OHI of Inland Empire Regular	OHI of Inland Empire Emergency	OHI of So. Idaho	OHI of Nevada	OHI of Oregon	OHI of Washington	TOTALS	% of TOTALS
Outdoor	$ 2,810	$ 4,080			$ 18,696	$ 38,000	$ 63,586	15.5%
Newspaper	5,535	5,980		$1,500	34,500	26,000	73,515	18.0
Television	12,800		NO	1,500	38,500	42,600	95,400	23.0
Radio	3,358	3,740		1,500	14,300	4,000	26,898	6.5
Direct Mail				750	3,000	6,500	10,250	2.5
Market Studies			BUDGET			4,000	4,000	1.0
Special Programs								
a. Window Banners, etc.		600			1,000	3,500	5,100	1.25
b. Newsletters, etc.			AT		1,100	2,900	4,000	1.0
c. Equipment Promotion		6,000			1,000	2,525	9,525	2.25
d. Builder Promotion	190	2,600		500		5,775	9,065	2.25
e. Exhibits		1,500	THIS			1,500	3,000	.75
f. Public Relations					8,780	16,800	25,580	6.25
g. Technical Manuals					750	5,250	6,000	1.5
Field Promotion	3,486		TIME		14,800	19,600	37,886	9.0
Administrative	3,300				4,000	17,200	24,500	6.0
Meetings and Travel	1,550				1,500	2,900	5,950	1.5
Miscellaneous	921			250	3,200	2,700	7,071	1.75
TOTAL	$33,950	$24,500		$6,000	$145,126	$201,750	$411,326	100.0%

Herkimer County, N. Y.

OILHEATING MARKET REPORT

HERKIMER COUNTY, a narrow strip of county lying north-south along its longest dimension, constitutes one of the smaller oilheating markets investigated. Its northern half, in the center of the state's scenic Adirondack Mountain region, is sparsely settled and of negligible importance to oil heat. The southern portion in the Mohawk River Valley, astride the New York Thruway, and containing most of its population, is of gentler, less mountainous topography. This is a region of small towns, villages and dairy farming country, and represents the sole market potential, from a heating standpoint. The city of Utica, just across the Oneida County line, to the west, lends support to the economy of the suburban portion eastward, within Herkimer County.

Population is relatively static. The 1950 census figures show a count of 61,407; an estimate by *Sales Management* places the figure at 63,600 as of the first of 1958.

In 1950, the total number of dwelling units of all types is recorded at 20,040, of which 17,613 were of the one-and-two-family variety; in 1958 there were not more than 22,000, we estimate, of which about 19,500 were one-and-two-family types. Most of these, an estimated 83%, are of medium valuation ($15-20,000); about 15% are of cheapest construction ($8-14,000) and only about 2% are in the top valuation, or $25,000-and-over class.

Home heating Characteristics

In 1945 (our earliest reference) a total of 1,100 fueloil ration permits were issued for centrally-installed oilburners within the county; another 3,381 permits were allotted for non-central oilfired equipment.

In the tabulation we have estimated the breakdown in heating equipment usage:

	1958		
	Central Heating	*Non-Central Heating*	*Totals*
Coal	3,300	1,150	4,450
Gas	3,600	1,250	4,850
Oil	7,250	900	8,150
Other	1,350	700	2,050
Total	15,500	4,000	19,500

These estimates reflect the decreasing market held by coal—a decline of nearly 58%—the growth in oilfired central heating over oilburning space heating systems—and the fact that total oilheat installations still are almost double those for gas.

In addition to the estimated total of 7,250 centrally-installed No. 2 oilburners in residences, we believe there are another 1,150 central installations in small commercial usage and in multiple dwelling units. Thus: a total of 8,400 such installations in this market.

Competitive Fuels and Costs

Anthracite coal, the solid fuel variety is used for househeating in this area, retails at an average price of $25 per ton in the sizes for hand-firing. In the stoker sizes the cost is around $20 per ton with a heat content of 14,000 Btu per pound. The per therm equivalent costs, on the basis of these prices, are 8.9¢ for the hand-firing sizes, 7.1¢ for the stoker sizes.

Natural gas service is provided, throughout the Mohawk River Valley section of the county, by the Niagara-Mohawk Power Corporation. There is no gas distribution in the town of Newport, north of Herkimer, and from there northward through the rest of the county. The fuel, of 1,000 Btu per cubic foot, reaches its lowest rate for househeating at 9.5¢ per Ccf. (or therm) after 48 therms consumption per month.

The cost of gas heat is pretty much of a standoff with that for oil heat, with the cost of No. 2 fueloil at 14.5¢ per gallon. On an average usage of 1,750 gallons of fueloil the cost of $253 annually compares to a cost of $241 for the equivalent heat content furnished by gas. In a case of lower consumption—for example, 1,000 gallons of fueloil, at $145, the cost for equivalent gas heat would be $141.50. Thus natural gas may be said to average approximately 10¢ per therm in cost.

The summer price per gallon for No. 2 fueloil has not dropped below 14.5¢, therefore it costs just a shade more than gas, on a per-therm basis, or 10.4¢—4% more in the average consumption brackets.

Fueloil Distribution

Our calculation of the total market volume of No. 2 fueloil distributed in the county comes to 18,372,000 gallons, of which 5,685,000 gallons goes into small-commercial, or multiple-unit dwelling usage. Non-central, or space heating demand for No. 1 fueloil is insignificant in this area, about one million gallons.

The major supplying companies bring in the greatest share of this volume, at the wholesale level, or approximately 85%. Independent wholesale suppliers account for the balance.

In direct, or retail distribution the major companies do very little of the overall business—not more than 2%. The independent wholesalers handle perhaps another 8%, but 90% of the tank wagon volume is distributed by the independent marketers.

One in ten of the dealer companies buys its fueloil supply "under the fill." No more than 20% of the total retail market volume is handled in this way.

The market is served to a fairly high degree through automatic or "keep-filled" delivery systems (85% of all customers) and the use of audible-type fill signals is quite prevalent. Nearly half (47%) of oil heat users' outside tanks are equipped with VENTALARMS or similar devices. The acceptance of budget payment plans is well-established among fueloil accounts, about one in five customers availing themselves of this system for leveling peak monthly heating costs.

One in five fueloil marketers (20%) are, additionally, in the gasoline business. Nearly 8% of the local dealers are in the solid fuel business, also.

Two out of five firms handling fueloil also sell and install oilburners. This is not too bad a level of identification with equipment distribution, for as will be noted in another section, these companies make most of the installations completed in this market.

Market Concentration

The 25 dealers doing business in the county operate a total of 54 delivery trucks, or an average of about two vehicles per company. Breaking the total down,

7 companies operate 1 truck each
11 companies operate 2 trucks each
5 companies operate 3 trucks each
1 company operates 4 trucks
1 company operates 6 trucks

Oilheating equipment Sales

The fueloil dealers who handle oilburning equipment (42%) are relatively active, accounting for 65% of the burners installed. The plumbing and heating companies sell nearly one-quarter of the total (24%), while the balance of 11% are sold and installed by specialized burner service companies, not in the fuel business.

Oilburner Service

About 62% of the market's total service requirement is handled by the fueloil marketers. (This parallels their activity in the sale of equipment.) The balance of the service work load is also divided along parallel shares among the straight (non-fueloil) heating dealers (23%) and the specialized burner service firms (15%).

In contrast to their current level of interest in equipment selling, the fueloil marketers are assuming a growing role in the equipment servicing picture. Most of the local oilmen attest to this.

About 9% of the oilheat users in the area have their oilburning equipment serviced under regular maintenance contracts. Another 55% of all burners are inspected, cleaned and tuned up during the year, so nearly two-thirds of the equipment installed in the market receives at least minimum inspection and maintenance annually.

Although regular service contracts are not common in this area, that type of contract which guarantees replacement of needed parts is offered by several dealers, at prices from $20 to $30 (average $23.75). Contracts which do not include parts replacement run from $10 to $15 (average, $14.25). An annual clean-up (apart from a coverage under service contract) is billed at a cost of around $9.50. The fueloil companies render non-contract service work at somewhat lower rates than those charged by non-fueloil heating contractors.

Advertising Promotion

In this market the supplying companies, as has been the experience elsewhere, have done but little individual advertising for oil heat. Again, typically, such promotion as has been done has placed chief emphasis on brand name merchandising, minor reference on the general advantages of oilheating as a facility, in the estimated ratio of about 80-20%.

The fueloil dealers have been more active in the field of individual-company advertising—about 40% of these marketers have promoted heating oil and oil heat through the usual media channels. The average expenditure in this direction, it is estimated, is at the rate of around $1.25 per active fueloil account, or perhaps 1% of total gross revenue.

The fueloil dealers of the county have formed their own local industry organization, the Herkimer County Fuel Dealers Association. Officers have been elected and plans have been approved to proceed with a cooperative advertising activity.

Agreement has been secured for a promotional investment by the supporting dealers at the rate of $50 per fueloil truck, with a maximum limit for any single company's contribution of $150.

Copyright, National Fueloil Council, 424 Madison Ave., New York 17, N. Y.

Oilfired Boilers on Roof save Space in new Store

Fort Wayne department Store uses oilfired Boiler without basement Space or expensive Chimney

IN DAYS GONE BY people were reminded, "A thing of beauty is a joy forever." In more recent years, it may have been someone with a less artistic and more practical mind who said, "Handsome is as handsome does."

Anyone looking at the new Wolf and Dessauer department store in Fort Wayne, Indiana, would have to admit that it is a splendid example of functional beauty.

The firm, often referred to locally as W & D, started more than 60 years ago and gradually expanded its operations. Finally, a few years ago, the directors decided that they had outgrown their housing facilities. The same progressive spirit which had been responsible for their growth, prompted them to look for the newest and finest ideas in construction and equipment.

They contacted A. Epstein & Sons of Chicago, one of the six largest industrial architectural firms in the world. Arrangements were made for the design of a new store building which would be more suitable for the present and future requirements of the largest department store in one of Indiana's largest cities.

There were obstacles. It required three years to acquire the site, involving the purchase of 18 parcels of land containing 11 buildings. After getting title to the land, it took only a month to raze the old buildings and prepare the land for the foundations of the new building. Construction began in January 1958.

The Hagerman Construction Corporation of Fort Wayne was the general contractor. Within approximately 12 months the new 250,000 square foot edifice was completed. There were about 100 sub-contractors.

One of the features of the multi-million dollar store was a facing of snow white rock-face Malvern brick, kilned in Arkansas, with each brick hand chipped and faced. The first floor has an eight foot set-back from the upper floors, providing a superior exposure for the store windows, and giving a sheltered promenade for shoppers and pedestrians.

Transportation to all floors is provided by both elevators and escalators. Elevators are designed for optional operation, manual or automatic. Escalators are arranged for 2 speed operation. During heavy traffic periods the speed can be increased from the normal of 90, to 120 feet per minute, providing an increase of about 1/3 in carrying capacity.

All lighting is of the ceiling type, affording illumination to every inch of each floor space, without shadows. The only windows are on the first floor, and they are for the purpose of displaying merchandise rather than to admit light.

It is reasonable to assume that any brand new building would have the latest and most up-to-date heating and airconditioning. With the continually increasing cost of floor space for storing and displaying merchandise, the location of mechanical equipment becomes an important factor in the design of commercial buildings.

Under most circumstances, A. Epstein & Sons believe in the use of a pent-house or upper floor as a logical location for mechanical store service equipment. As a consequence, anyone visiting the boiler room in the W & D store goes up to the roof rather than down to the basement. The enormous and expensive chimney which formerly rose from ground foundations to some distance higher than the top of the roof, is losing its place in modern construction.

Stepping from the elevator to the roof, it is only a few steps over to

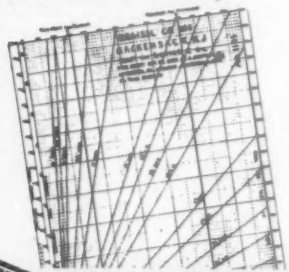
KRAISSL SEPARATORS

Minimize pressure loss in your oil lines

The proper separator size in your fuel oil lines is of critical significance in minimizing pressure loss. The sizing of suction lines and fittings—especially on heavy oil—must allow for the adverse effect of high suction lift on pump performance and wear.

Kraissl separators are designed with internal channels equal to or greater than the pipe internal area. The baskets offer minimum flow resistance because of high straining area. In general, use the same size Kraissl separator as the pipe line . . . single and duplex models, ¼" to 6".

You will find Kraissl chart AA-1143 — developed over our 30 years' experience — a helpful guide to sizing your heavy oil lines, Write for it today.



KRAISSL CO. Inc.

295 Williams Ave., Hackensack, N. J.

the concrete penthouse containing the heating and airconditioning equipment. Upon entering the door, the visitor faces two Kewanee Scotch type boilers. Each is fired by a package type oilburning system. Closer inspection reveals that these units carry the name Indiana "Burner Pack," manufactured by Williams Brothers & Miller, Inc., of East Chicago, Indiana.

The oilburning equipment was installed by Chaney Refractories Construction, Inc., of Fort Wayne. Richard R. (Dick) Chaney takes a lot of pride in the installation and operation of the entire system. He considers all rotary burners a highly developed and perfected mechanism, and takes pleasure in developing the high efficiency of which they are capable.

Some checking through other sources of information, revealed that Indiana burners were developed more than 30 years ago. In their early days they encountered a company which had an oil pitch problem. The operations of this company gave them a large supply of pitch as a waste product, and with no use for it, disposal was expensive.

Williams Brothers & Miller knew the heat value was there, and they knew that if the pitch could be kept heated, it could be handled in pipes as a liquid. As a liquid it could be atomized. When atomized, it could be mixed with air in proper proportions to become highly inflammable. When

COMMERCIAL & INDUSTRIAL oilburning

burned it was an exceedingly useful and desirable fuel.

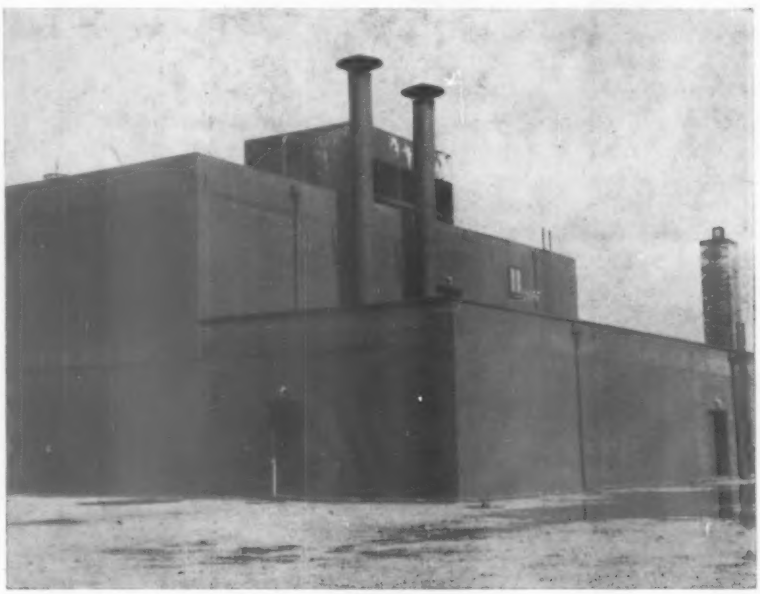
They also knew that if the heated pitch were ever allowed to cool in the pipes, it would cease to be liquid, and could not be moved in the pipes. Such a condition seems quite elementary now, for heating, pumping and burning highly viscous fuel is common.

However, if not the first, the makers of Indiana burners were among the first to successfully pipe, atomize and burn fuels which would not flow at normal temperatures. The steel mills at Gary proved a better laboratory for them than was available to most manufacturers in those early days.

With no attempt to enter into the comparative designs of various rotary oilburners, it might be said that the Indiana has the distinction of being the only one which does not have the primary air fan and the atomizing cup on the same motor driven shaft.

In the penthouse at W & D it could

A view of the penthouse atop the W & D store in Fort Wayne, Ind. The penthouse contains two oilfired boilers which provide hot water heating and needed process steam. A 700-ton, chilled water airconditioning unit is installed there also.



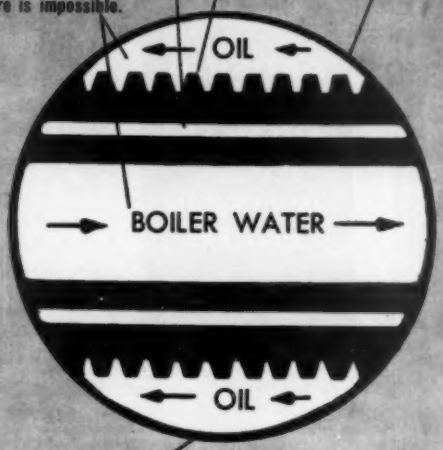
HOW TO USE BOILER WATER DIRECTLY IN A NO. 6 FUEL OIL HEATER WITHOUT DANGER OF SYSTEM CONTAMINATION

THERMO-FILM* —the safety barrier heat transfer liquid—is extremely thin to maintain maximum heat transfer.

EXTENDED SURFACE of outer tubes substantially reduces size and weight of heater.

COMPLETE ISOLATION of boiler water and fuel oil is accomplished by a coaxial tube assembly, with heat-transfer liquid between inner and outer tubes. **Boiler contamination in event of oil tube failure is impossible.**

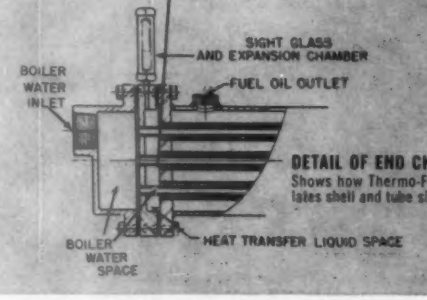
100% COUNTER FLOW results from straight tube construction. Heated oil exits at end where boiler water enters at its highest thermal head—another design feature assuring maximum overall heat transfer.



This Paracoil Thermo-Film* fuel oil heater permits direct use of boiler water and fuel oil in the same shell. Design safely isolates oil and water circuits. Oil leak cannot contaminate boiler stream. This diagram explains the heater's remarkable efficiency.

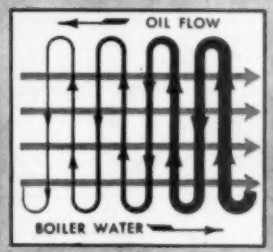
IMPROVED INDICATOR immediately reveals presence of oil in heat transfer liquid in the unlikely event a leak should occur.

PARACOIL "THERMO-FILM" SAFETY BARRIER FUEL OIL HEATER
Low pressure model—for gravity or forced circulation of boiler water. Provides maximum capacity with minimum size. Also available but not shown: high pressure models, for use with high temperature hot water or steam as the heating medium.



DETAIL OF END CHAMBER
Shows how Thermo-Film* isolates shell and tube side fluids.

INTERNAL TURBULENCE
Oil, with low pressure loss, passes in baffled flow across heating tubes — further increasing heat transfer rates and reducing bulk of the heater. (Thickness of oil flow line represents viscosity).



*Trade Mark Reg., U.S. Patent Office

Paracoil HEAT TRANSFER EQUIPMENT

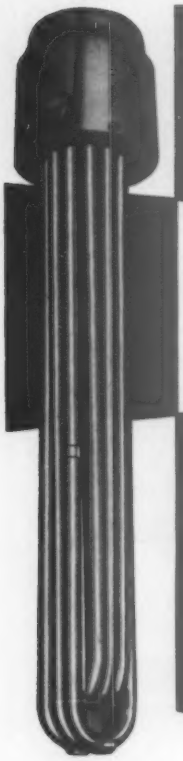
For details, write for Bulletin 60-N

DAVIS ENGINEERING

(A Division of American Metal Products Company)

520 Main Avenue, Wallington, N. J.

AN **amp** SUBSIDIARY



AVOID FALSE STARTS

with

COLD OIL LOCKOUT

feature of

GENERAL

Type FMTT

AUTOMATIC ELECTRIC IMMERSION HEATERS

for precombustion heating of heavy fuel oils

. . . automatically prevents oil below atomization temperatures from reaching burner nozzle . . . protects against false starts and shutdowns!!

★ COLD OIL LOCKOUT feature utilizes independent thermostatic circuit activated at desired atomization temperature . . . adjustable within 70° to 170°F. temperature range without change or effect on main control.

★ IMMERSION UNITS provide compact heat source at burner . . . deliver required temperature rise under wide range of flow conditions.

★ UL and CSA listed through 460 volts, 3 phase.

★ Interchangeable with most models of type and size now installed.

★ Standard and Short Series immersed lengths available.

Request Catalog EH-100

covering our complete line of Electric Fuel Oil Preheating Units (750 to 60,000 watts). Write General Fittings Company, Heater Division.

GENERAL FITTINGS COMPANY

EAST GREENWICH, R. I.

be seen that the Indiana "Burner Pack" included three electric motors. (Not including any control motors.) One had the sole responsibility of operating the atomizing cup, which, combined with the nozzle, constitutes the burner. A second motor operates the primary air fan, which is sized to produce the volume and pressure of air necessary for the specified load. In general practice the primary air represents 20% or more of the total air required for combustion. The third motor drives the fan furnishing the total secondary air, constituting a forced draft operation. (On natural draft jobs the third motor and fan would not be used, and for induced draft operation it would not be included with the Pack.)

Chaney explained that the electric oil heater included with the Pack was not necessary to insure good atomization of the No. 5 oil being burned, but served to maintain a reasonably consistent viscosity. The thermostat was set to maintain an oil temperature at some point between 90° and 110°.

A trip to the basement revealed duplicate pump units occupying minimum space back in one corner. The fueloil is pumped from the two 20,000 gallon tanks located beneath the floor, and is easily delivered to the burners in the penthouse. As soon as either or both burners are called upon by any

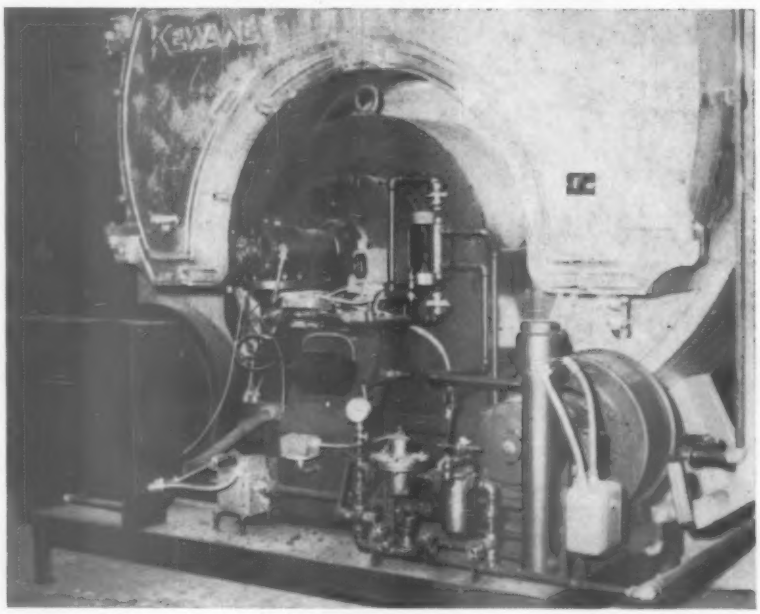
COMMERCIAL & INDUSTRIAL oilburning

control, a pump in the basement starts and oil is always available as soon as the solenoid valve opens to a burner. There are no pumps at the burners.

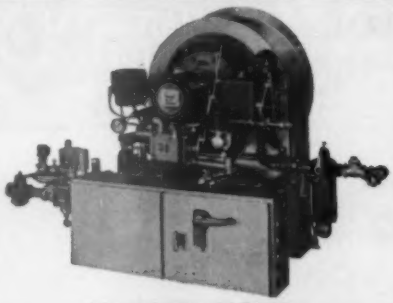
Each of the boilers has a heating surface of 1,429 sq. ft. requiring about 85 gallons of oil per hour for normal capacity operation. They are set to produce steam at 15# pressure. Process steam is required in the store throughout the year. When heat is required, steam is used to heat water in heat exchangers and the water is circulated to heater units for distribution in accordance with the demand of thermostats in various locations.

A 700 ton Carrier airconditioning plant is also located in the penthouse, and during hot weather, chilled water takes the place of the hot water circulated during winter months.

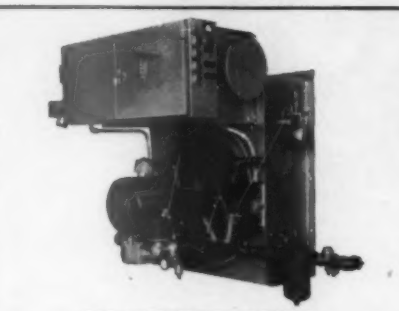
This is just one more example of the economy and reliability of fueloil keeping in step with the most modern buildings we have.



One of two Kewanee boilers fired with Indiana "Burner Packs". When heat is required the boilers produce steam to heat water in heat exchangers. The heated water then is circulated to heater units for distribution to store areas.



FOR SCOTCH TYPE BOILERS



FOR FIREBOX TYPE BURNERS

For Smooth, Efficient Combustion regardless of Stack Conditions and Firebox Pressures!

JOHNSON

FORCED DRAFT *Package-Unit* BURNERS

These quiet, smooth-running compact units come to you completely assembled, tested and wired at the factory . . . ready for easy, inexpensive attachment to any boiler or heat receiver. They give you top performance and minimum fuel costs on any heavy-duty heating installation.

They are built for firing on Oil Only . . . Gas Only . . . and for Combination Oil or Gas Firing. And they are available for either Scotch Type or Firebox Type Boilers as illustrated here.

These efficient units are powered by the time-tested, world-famous Johnson Model 53 Burners which *maintain a fixed air-fuel-ratio regardless of variations in oil temperature and viscosity.* Nine sizes are available ranging from 28 to 560 HP. Whatever your need, there's a Johnson Forced Draft Burner that will fill it efficiently.

Johnson Oil Burners

Builders of fine Oil Burner Equipment since 1903

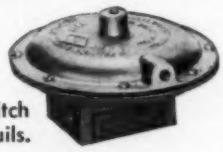
S. T. JOHNSON CO.
940 Arlington Ave., Oakland 8, Calif.
Church Road, Bridgeport, Pennsylvania

Dewey

SAFETY AIRFLOW AND PRESSURE SWITCHES

World Leader for Dependability

"D" Series Switch shuts off fuel if drop in fluid or gas pressure occurs.



"114" Series Switch shuts off fuel if blower fails.

Thousands sold. Factory Mutual and Underwriters Laboratories Approved. Standard equipment on leading products. Write for prices and literature.

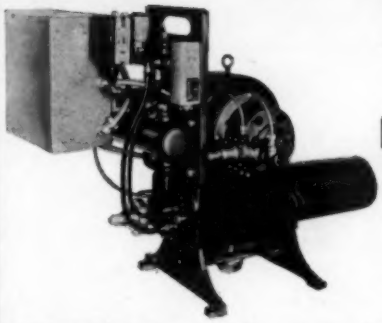
FREE CIRCULAR—

Dewey Gas Furnace Co.
102 E. Baltimore • Detroit 2, Michigan

PROTECTION FOR: Oil Burners—Industrial Ovens and Boilers—Power Gas Burners

---

No. 4 OIL BURNER by ELECTROL fully automatic



ELECTROL HO Series Oil Burners are designed specifically to burn No. 4 fuel oil and feature:

- No moving arms and rods, special pumps, or heaters.
- Famous Electrol Cut-off Valve prevents after-drip.
- Hot oil at nozzle on every burner start.
- Standard stock items—heater, controls, valves, nozzles, pump, etc.
- Three models, 2 to 20 gph.

and . . . the finest and most complete line of #2 oil burning equipment including warm air furnaces, boilers and water heaters, from .75 to 24 gph.

Write for "HO, No. 4 Burner" literature, or on any oil burner problem.

ELECTROL BURNER MANUFACTURING CO., INC.
RUTHERFORD, NEW JERSEY

M-H Ultraviolet flame Detector solves flame safeguard Woes

COMMERCIAL & INDUSTRIAL oilburning

"THE NEW HONEYWELL Ultra-Vision Flame Detector solved our flame safeguard problems on multiple burner installations," F. J. (Pat) Moran, manager of Ray Heat and Power Co., Chicago, said.

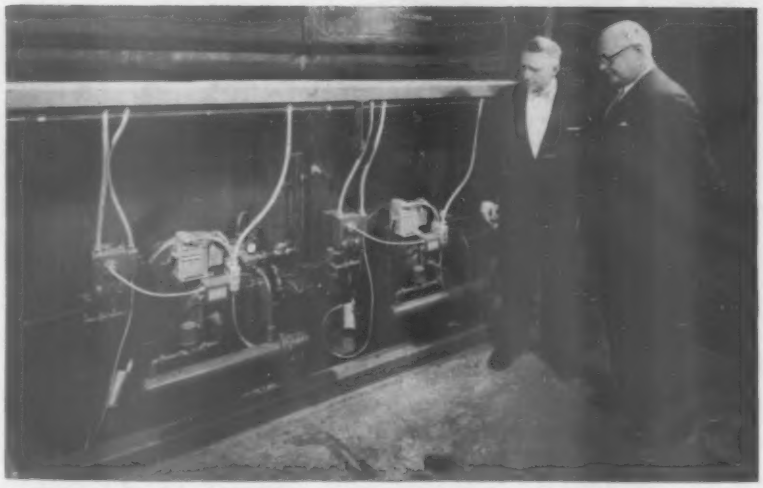
He voiced strong endorsement for the new U. V. Flame Sensing Device after the system had provided seven months of uninterrupted service on a multiple burner installation in a large Michigan Avenue office building.

Moran called the ultraviolet-sensitive flame safeguard system a "major break-through" in solving problems normally found on multiple burner installations because "it enabled us to avoid the battle with the infrared radiation of hot refractory and cross-flame sighting problems."

The multiple burner installation—engineered and installed under Moran's direct supervision—is used with the heating plant for a 22-story office building at 6 North Michigan Avenue. The installation consists of two boilers, each with two Ray oilburners firing into a common combustion chamber. At the full firing rate each boiler develops approximately 400 hp at 15 lbs. steam pressure, with provision on the burner to modulate down to a low firing rate of approximately 100 hp.

The control system includes Cleveland over-fire draft equipment, Honeywell R478A Protectorelay and the C7012 Ultra-Vision Detector. The system is so wired that in the event of a flame outage on one burner, the second burner is also immediately shut down.

Moran indicated that on this installation, because of the extensive use of refractory material in the combustion chamber, he felt it would have been virtually impossible to apply a conventional lead sulphide cell and still have the complete programming on each burner. "However," he said, "with the Ultra-Vision Flame Detection System this was possible, with the result that each burner pilot and main flame is supervised independently as though only one burner was firing in each combustion chamber."



Above: C. W. Buren, chief engineer, Arthur Rubloff & Co., and F. J. (Pat) Moran (right) inspect Ultra-Vision flame detector twin-burner installation.

Installation of the Ultra-Vision Detectors was easily made, and no complicated wiring was involved. Moran also said it was now possible to run the signal wires from the detector in the same conduit with the power leads.

After the successful application of the Ultra-Vision Detector System on the multiple burner installation at 6 North Michigan Avenue, Moran said his firm would also use this detection system on single installations on fire box boilers.

"We installed three 110-gallon-per-hour burners on Pacific firebox boilers for one of the nation's largest manufacturers of farm equipment, and again the Ultra-Vision Controls have proven extremely satisfactory," he revealed.

To obtain maximum performance from the Ultra-Vision Detector, Moran said "we still must have good flame stability, good combustion chamber design and constant oil pressure and temperatures so vital to a completely-engineered job."

With this combination, he added, the C7012 Ultra-Vision Detector offers ideal protection for either single or multiple burner installations, with no subsequent service cost.

Edited For You—

THE COMMERCIAL INDUSTRIAL OILBURNING BOOK

Computing boiler load
•
Selecting burner size
•
Combustion volume
•
Boiler types
•
Firebox construction
•
Water tube boilers
•
Selection of burner
•
And other valuable information
•

ONLY $2.00 A COPY!

COMMERCIAL & INDUSTRIAL OILBURNING BOOK contains a series of articles of particular value to you, including 12 features by Kalman Steiner on the "Design of the Industrial Installation."

This series begins with a brief "Introduction to Industrial Oilburning" and then discusses in succession, computing boiler load and selecting burner size, combustion volume, boiler types, and firebox construction, water tube boilers, selection of burner and accessory equipment, boiler settings, function and operation of primary controls, other controls, function and application of fueloil preheaters.

An 80 page book, 8½ x 11 page size, profusely illustrated with photographs, charts and diagrams.

A reservoir of information you can use profitably and priced low enough so that each serviceman in your organization may have one as a ready reference book. $2.00 A COPY.

COMMERCIAL & INDUSTRIAL oilburning

ORDER YOUR COPIES TODAY!

PLEASE SEND YOUR REMITTANCE AND ORDER TO:

· FUELOIL & OIL HEAT ·

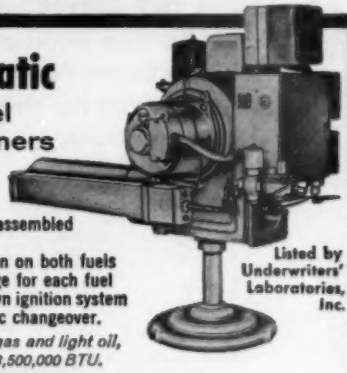
2 WEST 45TH ST. NEW YORK, N. Y.

Yes, when you have a burner application, consult the POWER FLAME Catalogue FIRST. You'll discover a complete range of POWER FLAME models and sizes in light oil and gas combination gun-type burners. This flexibility fits your requirements to a T and saves countless hours of catalogue searching. Every POWER FLAME burner has been "torture tested" for maximum efficiency and dependability. You profit from low-cost installation and maintenance, too!

Combi-matic
Dual Fuel
Gas-Oil Burners

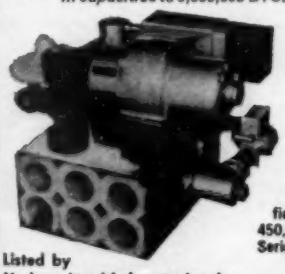
With these outstanding features:

- Completely factory assembled and wired
- Balanced combustion on both fuels
- Automatic air change for each fuel
- Each fuel has its own ignition system
- Manual or automatic changeover.



Listed by Underwriters' Laboratories, Inc.

FGO *Six models for gas and light oil, in capacities to 3,500,000 BTU.*



Combi-matic®
Dual Fuel
Gas-Gas
Burners

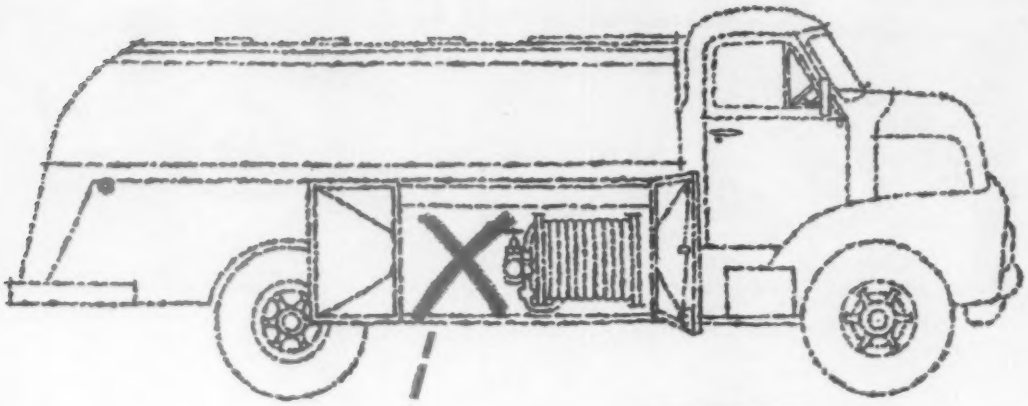
BFGG—For all gasses and Liquefied Petroleum. A complete line from 450,000 to 20,000,000 BTU. The BFGG Series incorporates many of the product features of the famous FGO Series.

Listed by Underwriters' Laboratories, Inc.

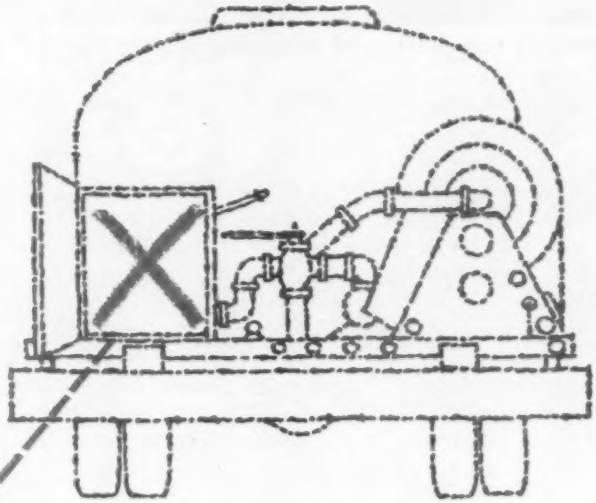
Write today for complete literature, information and specifications on POWER-FLAME'S Combi-Matic dual fuel burners. Also get the facts about THORO-MIX gas burners and POWER-FLAME gun type and spread type burners.

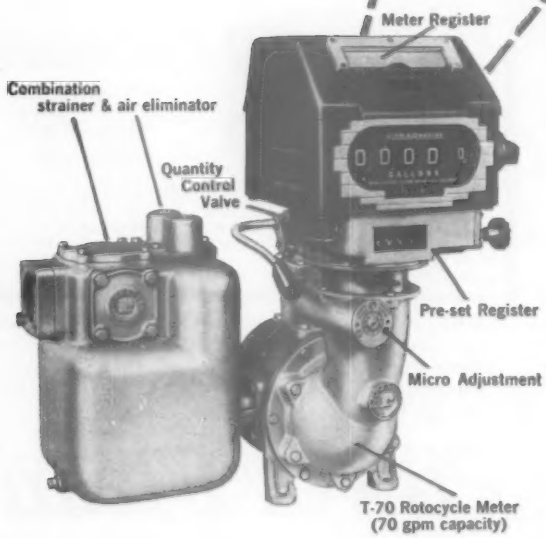
Power Flame®
Division, Inc. / 1203 MAIN ST. GRANDVIEW, MO.

HIT THE ROAD



X MARKS THE SPOTS
where you can build a more profitable business by specifying or installing Rockwell "T-70" tank truck meters.





Rockwell "T-70" Tank Truck Meter

WHY THIS NEW METER CAN BE INSTALLED MOST ANYWAY— MOST ANYWHERE

Three optional inlets—side, front and back—and two optional outlets—side and back—provide the utmost flexibility in installation. You can even make either a right hand or left hand setting without using extra parts.

WITH ACCURACY!

NEW ROCKWELL "T-70"

ROTOCYCLE TANK TRUCK METER

(Rate of flow 14-70 gpm)

Sized right, made right, to fit right into your trucks

You'll never find a more accurate or dependable tank truck meter unit than the new Rockwell "T-70". Its fine performance is built to last, for the measuring element is a sturdy Rotocycle meter, proved over the years to measure accurately under the most grueling work loads—to take the punishment of truck travel in stride.

Accessibility is another big feature. You can remove all principal parts—the rotor, air eliminator and strainer for routine cleaning or examination through plates held by a few cap screws and without breaking connections . . . and the Rockwell "T-70" is easy to calibrate —only a screw driver is required.

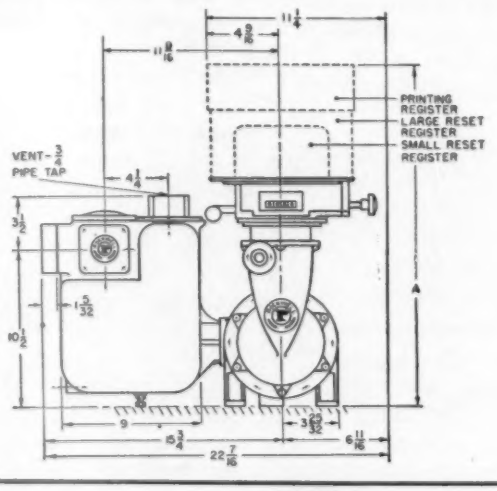
A new smooth closing system for automatic shut-off is provided. You just dial the quantity to be delivered in advance, then touch a lever and the meter will "count down" and shut itself off in easy stages as the zero point is reached.

All this, plus easy installation makes the Rockwell "T-70" truck meter an exceptional "package" for petroleum marketers, either in new trucks or as replacements. Get full facts now by writing for bulletin OG-410. Rockwell Manufacturing Company, Pittsburgh 8, Pa.

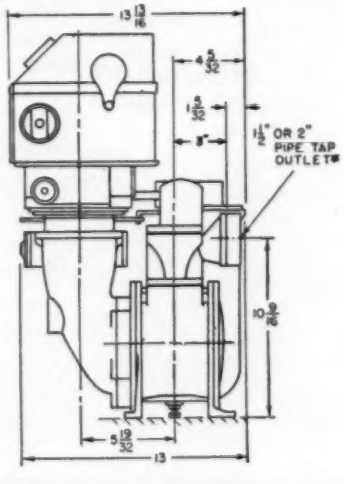
TRUCK METERS
another fine product by
ROCKWELL

CHECK THESE COMPACT DIMENSIONS

FRONT VIEW



SIDE VIEW



Truck Talk

by Chet Cunningham

BALANCED BRAKING on trucks and trailers has been a long-time problem for truckers in every line of hauling. What is needed is safe, straight, balanced and non-skid braking. Now a new principle of braking has come to the truck field that may handle all these requirements.

It is borrowed from aircraft braking and is simple, easy-to-install and works with any make or type of brakes on any kind of truck, trailer or tanker.

This is not a new kind of brake, rather it is an accessory to the braking system that provides completely balanced braking with individual wheel control.

This device is called Hytrol and it produces safer stops with complete directional control and maximum braking efficiency even in ice, snow, slush or other slippery roadbeds. It also completely eliminates wheel hopping. It means maximum braking in any situation, no matter how slippery, with no danger of skid or jackknife.

Here is how it works. Two simple components do the job. One is a skid detector that is mounted at the hub of the wheel. The other is the Hytrol valve. The skid detector is basically an inertia-wheel. It masterminds the entire braking action. It senses such problems as a locked wheel or potential skid. Within a fraction of a second it signals the control valve to apply the corrective action.

This two unit system permits maximum road friction, and therefore maximum braking efficiency. Since each wheel has a separate control unit, you get individual wheel control.

Heard about the new transistorized coils that are coming out? They are overdue. Actually the ignition systems used in today's gas enignes, are fundamentally the same type that sparked the autos and trucks 35 years ago. The ignition specialists have made refinements and improvements to keep up in the horsepower and efficiency races, but no big changes have come in basic design.

Now Auto-Lite has a radically new ignition coil. It is transistorized and is completely compatible with the other parts of the regular ignition system.

They call it a Transicoil and it holds a transistor and primary and secondary circuits required to produce the high voltage needed at the plug. To install this new unit, all you have to do is take off your present coil and condenser and mount the new Transicoil on a convenient bracket.

The big feature here is the transistor. It has no moving parts—nothing to wear out quickly. Yet this transistor can switch current on and off at a tremendously fast rate. It does this through an odd type of metal called, "germanium," and the current needed is only about one-quarter of an ampere—that's not enough to jolt a butterfly.

This all means greatly increased point life. Auto-Lite says a set of points that had traveled for 44,000 miles were only beginning to show signs of pitting. Regular points last about 10,000 miles. The firm says the points will be good for over 100,000 miles with the Transicoil.

The Transicoil also keeps voltage at the sparkplug almost constant throughout the entire operating range of the engine. This isn't true with most conventional ignition systems. They work fine at the low speed range, but as speed increases, the available voltage at the plug drops quickly. Then the spark and the efficiency drops.

The Transicoil doesn't have this problem, mainly because there is an almost instantaneous build-up of input current when the transistor is triggered regardless of engine speed.

Production is set for 1961.

Those dry-type air cleaners that are coming out must be serviced properly if you want good results from them. Do it this way:

Clean the dust cup at least once every ten hours of operation. In dusty operations, check and clean more frequently. Never allow dirt to build up to the level of the filter tubes.

To empty the dust cup on many models, follow this procedure. Stop the engine, push down on the latch lever to release the cable that holds the dust cup to the cleaner housing. Remove the cup and clean thoroughly. Check the dust cup seal and replace if it is worn or damaged.

Normally the filter cartridge can be cleaned and re-used several times depending on the type of dirt trapped, and the care used in cleaning. Three methods can be used.

Dirt can be dislodged from the paper element by tapping it lightly on a solid surface while rotating the cartridge. Care should be taken not to bend or dent the cartridge while tapping it and to prevent any dirt from falling on the clean side of the element.

For more effective cleaning, direct a jet of compressed air (not more than 100 psi) along the pleats of the cartridge from the clean side of the element toward its dirty side. Be sure not to rupture the paper with the air nozzle or the air jet.

Very dirty cartridges can be cleaned by washing in soap and water. Use a good non-sudsing detergent such as Soilax and warm water. If a hose is used to rinse the paper element, be careful not to rupture the paper. Flush it from the clean side. Dry thoroughly by evaporation before re-installing it.

Then examine it carefully. Place a lighted light bulb inside the cartridge. This will show up any ruptures or pin holes. Remember, even the smallest hole will pass dirt into the engine and cause costly damage.

"Dead-man" controls may be coming for cars and trucks. One of these days every car and truck may be required to have such a control such as railroad engines now have. One has developed in Italy but is not yet on the market. It is a ring that fits almost flush with the steering wheel. The driver's hand on the wheel keeps it depressed. If he releases his grip, the ring springs out to trip a switch that blows the horn and applies the hand brake automatically.

Gulf Solar Heat Sends Business and Dealer Soaring

Jesse Terry is known as "the flying oil man" to his customers. At 37, he heads a prosperous business serving over 5,000 accounts.

JESSE TERRY of Feasterville, Pa. is one Solar Heat dealer who loves to fly. And nowadays, with a minimum of service problems, Jesse Terry logs more flight time than ever before.

"I have to credit new Gulf Solar Heat for that," he says. "Our annual clean-up calls to all our customers are now a breeze. No sludge, no clogged nozzles or filters. Which, of course, means fewer emergency calls at the season's peak."

The reason for Jesse Terry's praise? New Gulf Solar Heat is hydrogen-purified to burn ultra-clean, keep parts operating at peak efficiency. Service calls drop—profits grow!

For complete information on new Solar Heat plus other sales advantages you can enjoy as a Solar Heat brand reseller, call your nearest Gulf office collect. Do it today!

Go one better—go Gulf

GULF
SOLAR HEAT
heating oil

On a recent "pleasure" flight, Terry spotted a new housing development. Soon afterward, he signed up 399 new accounts!

The Terrys at home in Feasterville, Pa. Left to right, Daniel, Jesse, Douglas, Linda, and Mrs. Verna Terry.

fueloil & oilheat

(*Begins on page 25*)

James Lawler named President of Fluid Controls Institute

JAMES R. LAWLER, Lawler Automatic Controls, Inc., Mt. Vernon, N. Y., was elected president, Fluid Controls Institute, Inc., at the spring meeting held at the Mid-Ocean Club, Bermuda, early in May.

Other officers are Fred Weldon, General Controls Co., 1st vice-president; Robert McCormick, Automatic Switch Co., 2nd vice-president; Paul Rogers, Jr., Skinner Chuck Co.; Eric A. Bianchi, corporate secretary, Mason-Neilan, Division of Worthington Corp. and E. R. Rath, executive secretary.

The fall meeting will be held at the Drake Hotel, Chicago, on November 23-25. The Institute has its headquarters in New York City and members are manufacturers of automatic regulator valves, control valves, solenoid valves and heating specialties.

C. M. Blickensderfer, Sinclair Refining Co., and a director of the National Fueloil Council, Inc., tells the group of dealers below the Mason and Dixon line how oilheating promotion can affect the future position of their business.

Tidewater Association holds Oil Heat dealer Conference

MORE THAN 100 dealers from 24 Virginia and North Carolina localities participated in the two-day Oil Heat Dealer Conference held in Norfolk, Va., June 24-25, under the sponsorship of the Tidewater Oil Heat Association and the Distributive Education Services of Hampton Roads.

In each of the six general sessions, participants were addressed by a top executive in the fueloil or general business field. Between these sessions were one hour conferences on specific topics—with each limited to 20 dealers. Thus, each dealer was able to attend five conferences selected from a list of 14.

Among the speakers at the meetings were Joseph L. Berry, Berry Coal & Oil Co., Greensboro, N. C.; Thomas E. Carson, executive secretary, Maryland OHA, and Clarence M. Blickensderfer, Sinclair Oil Corp.

Keep heating costs low with HEV-E-OIL commercial-industrial burners

Hev-E-Oil burners furnish all the air necessary for combustion, assuring perfect fire control under all weather conditions. Low fire start that builds up gradually to the flame size required means smooth, safe operation. And once the burner is set for greatest efficiency, it *stays* that way no matter what the weather.

A complete package! Fire tested! Automatic, electronic controls. Meets all codes. Easy to install. Models from 5 to 150 gph.

For more information on Hev-E-Oil burners write Industrial Combustion, Inc., 4507 N. Oakland Ave., Milwaukee 11, Wis., Dept. FO-859.

INDUSTRIAL COMBUSTION INC.

EXECUTIVE OFFICE: 4507 N. OAKLAND AVE., MILWAUKEE 11, WISCONSIN

Constant ignition type.
UL approved. Interchangeable
with other makes in the field.

New W-R CONTROL CIRCUIT stops costly call-backs caused by unnecessary oil burner safety-switch lock-outs

White-Rodgers new 611-1 Oil Burner Control does away with expensive call-backs before they start. Its advanced new circuit eliminates practically all hard-to-check safety-switch lock-outs caused by short cycling or slow heat build-up in the stack . . . materially shortens testing time during installation, too.

Turn call-back losses into profit . . . see your White-Rodgers supplier for complete details on the new "serviceman-designed" 611-1 Oil Burner Control.

White-Rodgers "On-Target" Advertising goes regularly to
Architects • *Builders* • *Contractors* • *Home Owners*

WR

WHITE-RODGERS

CONTROLS FOR HEATING • AIR CONDITIONING • REFRIGERATION • APPLIANCES

ST. LOUIS 6, MISSOURI TORONTO 8, CANADA

fuel oil & oil heat

With a bold new step IN OIL FURNACES

FORWARD TREND

Dream Room Styling that fits anywhere in any home!

Here are the first home heating units ever designed for *living* areas . . . styled to grace any interior, upstairs or down. From the older home's "rec" room to the living room of a basementless modern, Perfection gives your customers new planning freedom to make "dream rooms" come true.

"HIGH STYLE" comes to Wall Furnaces, too

New, economical space-savers de-luxe! With patented fuel-mizer Midget Pilot. 65,000 BTU output.

Perfection® sets the FORWARD TREND

to bigger, more profitable furnace sales for you

It's the "residential heating and cooling of the future" brought to the oil heat field today! A completely new, oil-fired line, with the Perfection standards of furnace engineering and styling selected "to show the world" at the Brussels Fair. These new furnaces will spark your selling enthusiasm, because they're so different, because they more than live up to every claim, because they *are* so completely NEW!

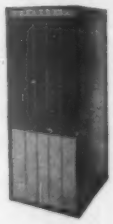
See what the Forward Trend means to your customers . . . and to you!

FORWARD TREND
NEW COMFORT-LEVEL CONTROL

Always an outstanding exclusive, now Perfection's Regulaire® with new Electro-Magic "brain" is terrific! It's the air control that works hand-in-glove with the thermostat, matches heat circulation to demand, stops on-off hot and cold blasts forever.

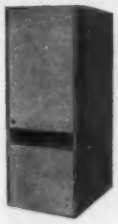
FORWARD TREND
FULL-LINE FLEXIBILITY to meet all your job and price requirements

Customer want the best? A Regulaire will carry him "first class" through years of automatic comfort. Want the style, but medium price? The Stylist has it plus a world of extra value inside. Strictly competitive? Trimline engineering equals most of the "bests" at prices the "specials" can't beat.



REGULAIRE Series UPFLOW and COUNTERFLOW

STYLIST Series UPFLOW and COUNTERFLOW



TRIMLINE Series UPFLOW and COUNTERFLOW

FORWARD TREND
COMPACTNESS TO FIT ANY SPACE

Whether it's a flush-wall fit, a clothes-closet squeeze, or just plain compact neatness you need, these Perfection beauties beat them all for size. All popular sizes only 56" high . . . widths down to only 14".

FORWARD TREND
UNSURPASSED FUEL ECONOMY

Perfection's hi-pressure oil burner with unique Multi-Jet blender is the key to perfect air-oil mixture, new fuel savings, outstanding quietness of operation. Lower nozzle temperatures and less nozzle failure, too.

FORWARD TREND
READY TO INSTALL...FAST

No more internal wiring, no more stack control or draft regulator installation, no more combustion chambers to assemble. Perfection oil furnaces are prewired, completely factory assembled*, ready to connect. You sell UP, hold costs DOWN when you install a Perfection.

* except for draft regulators on smallest size

Perfection also manufactures a complete line of Conversion Burners, Air Conditioners, Heat Pumps, Water Heaters and Portable Room Heaters.

OIL FURNACE SPECIFICATIONS—Upflow Models

Regulaire Models	Stylist Models	Trimline Models	BTU Output at Bonnet	Firing Rate GPH	Motor HP	CFM Heating (90° Rise)	CFM Cooling at .5 S.P.
OM 84R	OM 84	OM 84X	84,000	.75	1/6	850	1100 — 1300
OM 100R	———	OM 100X	100,000	.89	1/4	1020	1100 — 1300
OM 112R	OM 112	———	112,000	1.0	1/4	1140	1200 — 1850
OM 123R	OM 123	———	123,000	1.1	1/4	1250	1850 — 2000
OM 140R	OM 140	———	140,000	1.25	1/3	1430	1850 — 2000

AMPLE CAPACITY for AIR CONDITIONING

Join the FORWARD TREND to bigger SPACE HEATER sales. Modern CORONET styling, 12 built-right models to fit every customer's needs. And to clinch more sales, Perfection's exclusive Midget Pilot that cuts fuel bills 30 to 50%!

FOR COMPLETE DETAILS CALL, WIRE OR WRITE

Perfection INDUSTRIES

Division of HUPP Corporation • CLEVELAND 10, OHIO

Guaranteed Comfort since 1908

Chicago Engineers attend Meeting at Bell & Gossett

MEMBERS and guests of the American Society of Refrigeration Engineers and the American Society of Heating, Ventilating and Air Conditioning Engineers in the Chicago area had a recent meeting at the Morton Grove, Ill., plant of Bell & Gossett Co.

The two associations are merging under one name so this was the Chicago group's last official meeting under the old designation.

Bell & Gossett was host for cocktails and dinner before a plant tour.

R. E. Moore, Bell & Gossett, addressing the meeting of the Chicago ASRE held at the firm's Morton Grove, Ill., plant.

Calendar of Coming Events

SEPTEMBER

10—Westchester OHI, Westchester Country Club, Rye, N. Y.

16–17—Ohio Petroleum Marketers Association, fall conference, Sheraton-Cleveland Hotel, Cleveland.

16–18—National Petroleum Association, annual meeting, Traymore Hotel, Atlantic City, N. J.

17—Long Island Petroleum Credit Manager's Association, credit conference, Garden City Hotel, Garden City, N. Y.

19–27—Eastern States Exposition, Springfield, Mass., with Oil Centennial Theme.

20–22—Oil-Heat Institute of America, Board of Directors meetings, Seaview Country Club, Absecon, N. J.

20–23—North Carolina Oil Jobbers Association, annual meeting, Grove Park Inn, Asheville, N. C.

27–29—National Association of Oil Equipment Jobbers, annual convention and trade show, Leamington Hotel, Minneapolis, Minn.

30–Oct. 2—Central Supply Association annual convention, Palmer House, Chicago.

OCTOBER

11–13—Tennessee Oil Men's Association, Annual fall convention, Andrew Jackson Hotel, Nashville, Tenn.

13–16—Fuel Merchants Association of New Jersey, Exhibit and convention, Haddon Hall, Atlantic City.

NOVEMBER

2– 5—Air-Conditioningg and Refrigeration Industry, 11th Exposition, Atlantic City, N. J.

9–11—American Petroleum Institute, annual meeting, Conrad Hilton, Palmer House and Congress Hotels, Chicago.

DECEMBER

3–4—National Warm Air Heating and Air conditioning Association, Chase Park-Plaza Hotel, St. Louis, Mo.

GOING-GOING-GONE
THEY SELL!
Klemm® MICRO
FUEL OIL FILTERS
KLEMM FUEL OIL FILTERS never stay long on your shelves. Good design and performance, attractive packaging and prices make them sure-fire best sellers . . . the kind that puts profit in your pocket.
Always stock KLEMM . . . they sell!
PK-150 U/L
JR-60
FF-430 U/L
FF-430G
SEND FOR complete literature and prices. Do it today.
Millions Since 1932
KLEMM PRODUCTS
Division of
KLEMM AUTOMOTIVE PRODUCTS COMPANY
1722 North Damen Avenue • Chicago 47, Illinois
EXPORT: Guiterman Co., Inc., New York 4
CANADA: Elgee, Ltd., Toronto

It's easy to convert manual coin valves to automatic venting...

with No. 55 KEENEY

DUOVENT

AUTOMATIC CARTRIDGES

1. **REMOVE** coin valve screw.
2. **LEAVE** old coin valve body in place.
3. **INSERT** No. 55 Keeney DUOVENT Automatic Cartridge.

That's all there is to it! The easy, low-cost way to convert manual coin valves to automatic venting. No tools needed! The perfect answer to modernization of existing hot water heating systems.

THE KEENEY MANUFACTURING CO.

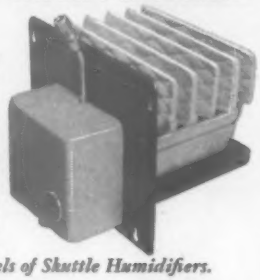
NEWINGTON, CONNECTICUT

Follow the leader — KEENEY

3 GOOD REASONS
why Heating Dealers everywhere like to Sell
Skuttle PRODUCTS

1. The only complete line of humidifiers for warm air heating systems
2. More profitable sales due to greater product demand
3. Superior quality construction

The New Skuttle Model 711 Counter-Balanced Humidifier



Here's a sure bet to increase your sales and profits. The new Skuttle Model 711 is installed in vertical plenums of any warm air heating system easily and quickly. There's no complex mechanism, operates with a single orifice. The Model 711 is shipped completely assembled for do-it-yourself installation if desired. Complete instructions and template included in package.

Write for further details on all models of Skuttle Humidifiers.

Skuttle Patented Vapoglas Plates

Millions of humidifier evaporating plates need replacing annually. Increase your profits by using Skuttle No. 489 Universal Vapoglas Plates, designed to fit all makes of humidifiers. Skuttle Vapoglas Plates have been satisfying customers for years. Get the best, install Skuttle Vapoglas Plates . . . copied but never equalled.

Skuttle-aire Electrostatic, Permanent, Washable, Lifetime Air Filters

Your customers will save; you will profit with Skuttle-Aire permanent, washable air filters for furnaces, central air conditioning systems and room coolers. Replacement costs are completely eliminated. Easy to install, easy to remove for cleaning. Skuttle-Aire light weight filters are available in all sizes. *And they never need oiling.*

You can be sure your customers are getting maximum efficiency from any installation where Skuttle-Aire Electrostatic, Permanent, Washable, Lifetime Air Filters are used.

Skuttle MANUFACTURING CO.
MILFORD, MICHIGAN

IN CANADA: WAIT-SKUTTLE CO., OAKVILLE, ONT.

NEW PRODUCTS

Signet Thermostat contact Assembly is within a dust-proof Enclosure

SIGNET, MODEL T500, room thermostat combines modern appearance with classic lines. The thermostat has platinum iridium alloy contacts to resist oxidation or corrosion and features the entire contact assembly located within a dust-proof enclosure. Also standard is an adjustable anticipating heater, which can be removed and replaced in the field.

The unit has an all-metal cover and a wall mounting plate which, in addition to holding the thermostat to the wall, automatically completes electrical connections. The plastic adjusting dial on the thermostat glows in the dark, while the front can be covered with paint, wallpaper or fabric to match room decorations.

With each model T500, Signet includes a homeowner's pamphlet to explain what the thermostat does and how to use it for maximum comfort.

Made by: Signet Controls, 3205 S. E. 13th Ave., Portland 2, Ore.

American-Standard Type 30 Remotaire is year-round horizontal Conditioner

TYPE 30 Remotaire is a year-round horizontal fan-coil airconditioner for apartments, hotels and motels, designed for use with hot or chilled water in concealed overhead installations.

Fan load and motor speed are carefully matched, with quiet conditioning provided by the large-surface three-row coil. Drain-pan design eliminates all metal-to-metal contact between pan and the bottom of the coil; no auxiliary drain pan is necessary.

Made by: American-Standard, Plumbing & Heating Div., 40 West 40th St., New York 18, N. Y.

Furnaces by Chrysler

A line to please prospects ...plus a plan that makes sense to builders and profits for you!

For home-owners: Chrysler Furnaces have the features, the styling and the prices to help you turn low-profit repair jobs into high-profit new furnace sales. The complete Chrysler line gives you the exact type and capacity for any home. And the famous Chrysler name gives you the brand-acceptance that makes it easy to turn your prospects into satisfied customers.

For builders: Chrysler Furnace Dealers offer a volume sales plan that makes good sense to even the most economy-minded builder. This plan means lower costs for him—and extra sales for you. Your local Chrysler Distributor can quickly show you how easy it is to make money in the competitive builder market with Chrysler Furnaces.

For dealers: The Chrysler line is the high-profit line. Sales come easier when you're backed by a nationally advertised, nationally respected line. Installation costs are lower because Chrysler's exclusive package design permits fast, easy one-man installation. And Chrysler quality means your profits won't be drained away by costly service call-backs.

Get the complete story of the many advantages of Chrysler Furnaces. Call your local Chrysler Airtemp Distributor today—he's listed in the Yellow Pages.

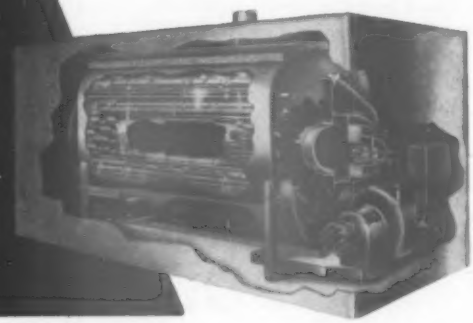
CHRYSLER AIRTEMP

Airtemp Division, Chrysler Corporation, Dept. K-89, Dayton 1, Ohio
Canadian Distributor: Therm-O-Rite Products, Ltd., Toronto, Ontario

The Bethlehem
DYNATHERM

PAYS FOR ITSELF
IN 5 YEARS!

FUEL SAVINGS
OF MORE THAN 40%
ARE COMMON!



Acclaimed America's *finest* Oil Heat Package Unit, the Bethlehem DYNATHERM is truly the most efficient automatic heating plant on the market! It actually *exceeds customers' expectations* because it gives them *more* for their money in fuel economy, convenience and comfort than they have ever known before, regardless of what heating system was used!

BETHLEHEM FOUNDRY & MACHINE COMPANY
BETHLEHEM, PENNSYLVANIA, U.S.A.

Waterous truck transport Pump is lightweight with high Capacity

A COMPACT rotary pump with 300 gpm capacity and 70 lb. weight is suitable for fast unloading of truck transports. Model HJ700 measures 11¾" high, 11" wide and 17⅜" long; it has a lightweight aluminum alloy casing. Three-lobe rotors independently driven by hardened steel pilot gears, do not depend on the product pumped for lubrication.

Made by: Waterous Co., 80 E. Fillmore Ave., St. Paul 7, Minn.

Thrush water pressure regulating Valves operate on initial Pressure of 250 Lbs.

THRUSH has redesigned its line of water pressure regulating valves, which are operated by a special heat-resistant, composition diaphragm and available in ½", ¾" and 1" sizes. The cast-iron or bronze valves feature all-brass working parts.

The valves operate with incoming pressures up to 250 lbs. and up to 100 lbs. reduced pressure. Seat and built-in monel strainer can be removed for cleaning or replacement without removing valve from the line.

Made by: H. A. Thrush & Co., Peru, Ind.

"Generally these bills are okay, but I wouldn't list starting the burner as an 'incendiary charge.'"

Talking to customers about firebox installation?

Point out that

B&W IFB

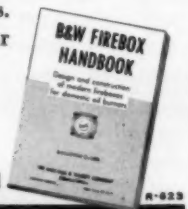
also means savings

In Fuel Bills

Here's a "dollar-and-sense" sales story on firebox installation that will help your customers save 15-25% in fuel bills. That's how much B&W Insulating Firebrick, *the lightest insulating firebrick made,* can cut fuel bills each year.

The reason? B&W IFB have millions of tiny air cells that impede the flow of heat. As a result, these brick come up to operating temperature faster. Heat is held inside the combustion chamber. That means lower fuel bills, more complete combustion, clean and odorless heat.

Increase your sales and profits by telling your customers the benefits of B&W fireboxes. It's an effective way to build your reputation in a community.



A Valuable Guide for Every Installer

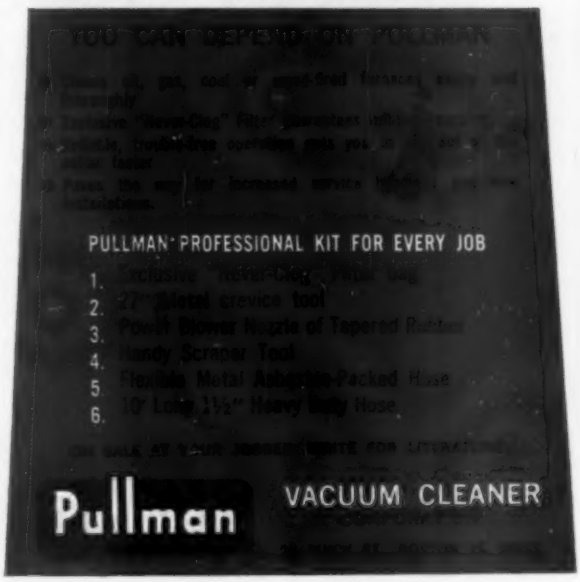
Send today for this Handbook!

R-623

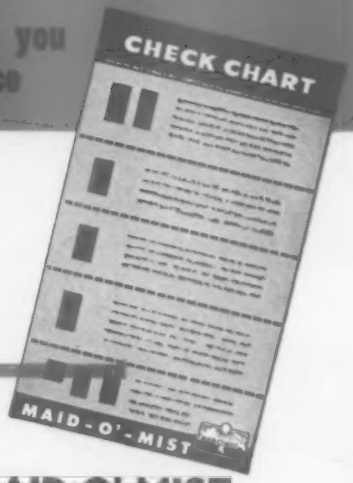
THE BABCOCK & WILCOX CO.
Refractories Division
Works: Augusta, Ga.
General Offices: 161 East 42nd St., New York 17, N. Y.

DEPENDABLE Pullman

THE WORLD'S LEADING FURNACE CLEANER



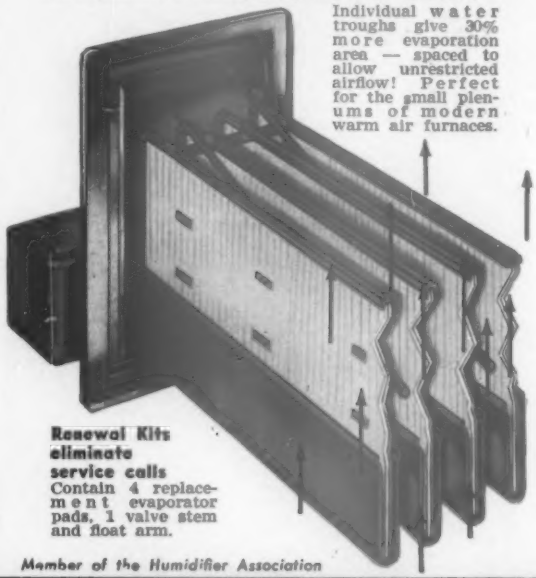
which size — which type
HUMIDIFIER
is best for each job?
NEW MAID-O'-MIST ®
WALL CHART
shows you at a glance



WRITE for your FREE COPY

ONLY
MAID-O'-MIST
CONVECTOR
HUMIDIFIERS
give you 9 sizes! Simple to install . . . for conventional and counterflow warm air furnaces

Individual water troughs give 30% more evaporation area — spaced to allow unrestricted airflow! Perfect for the small plenums of modern warm air furnaces.



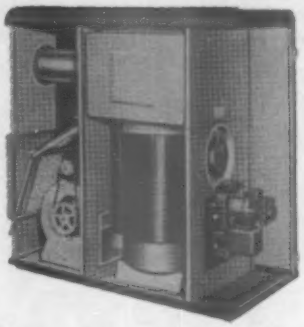
Renewal Kits eliminate service calls
Contain 4 replacement evaporator pads, 1 valve stem and float arm.

Member of the Humidifier Association

MAID-O'-MIST, Inc.
3217 NORTH PULASKI ROAD
CHICAGO 41, ILLINOIS
MAID-O'-MIST Inc.
HEATING SPECIALTIES

Luxaire announces three new Sizes of oilfired, factory-assembled Units

THREE NEW LUXAIRE oilfired furnace units have heating capacities of 84,000, 95,000 and 112,000 Btu/hr at the bonnet, Commercial Standard No. CS-195-rated. Complete factory assembly includes installation of the gun-type oilburner, flame-detector-type primary control and all internal wiring.



All three are available with burner and controls exposed, or with a built-in, hinged-door vestibule. Units have round, heavy gauge steel combustion chambers with a factory-installed refractory firebox lining for quiet operation.

Made by: The C. A. Olsen Mfg. Co., Elyria, Ohio.

Pocket-size Detector checks for Leakage of Refrigerant

KIDDE MFG. has introduced a pocket-size detector to trace "Freon" leakage in summer airconditioning equipment. The device uses disposable cartridges which burn for half an hour each. Even traces of a refrigerant leak turn the flame a bright green.

The detector, which has an on-off control, doubles as a blow troch and soldering tool. Halide fitting slips off to provide 3500° of pin point heat.

Made by: Kidde Mfg. Co., Inc., 35 Farrand St., Bloomfield, N. J.

Model D Whistler tank fill Signal installs without cutting Piping

MODEL D Whistler audible fill signal installs in existing tanks without cutting into the present piping. The signal can be put in place with a special tool, after temporarily removing the gauge from the tank. One instrument and one size are required for both new and already-installed tanks. The light, compact device has been field-tested and carries UL approval.

Made by: Applied Mechanics Co., 381 Congress St., Boston 10, Mass.

Reduce your inventory problems...

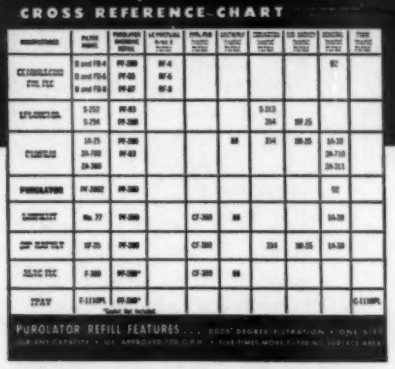
THESE 4 PUROLATOR REFILLS SERVICE 98% OF ALL OIL BURNER FILTER INSTALLATIONS

With the addition of three new sizes, the famous PurOlator line of Micronic® filter refills (including gaskets) will now fit 98% of all oil burner installations.

In addition to supplying most requests from a minimum stock of four sizes, you can give your customers the five outstanding benefits of PurOlator Micronic filtration—*no matter what filter is installed on their job.*

1. Water and acid resistant element.
2. Uniform density filtering to .0005".
3. No channeling or "soft" spots.
4. Will not shrink, distort, stretch, flake or deteriorate.
5. A guaranteed filtering capacity of over 100 gallons per hour U.L. approved.

CROSS REFERENCE CHART



PUROLATOR REFILL FEATURES . . .

This handy guide shows you, instantly, the filter refills which may be used, interchangeably, in all leading filter units.

PUROLATOR

PRODUCTS, INC.

"FIRST IN THE FIELD OF FILTERING"

Rahway, New Jersey and Toronto, Ontario, Canada

fuel oil & oilheat

-MAIL COUPON FOR FREE CROSS-REFERENCE CHART-

Purolator Products Co., Inc.
Rahway, New Jersey

Please send me _____ copies of your Oil Burner Filter Element Cross-Reference Chart.

Name _____

Address _____

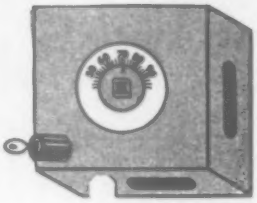
City _____ Zone _____ State _____

It's LATER Than You Think!

The heating season is just around the corner, with its, late at night, and weekend, "no heat calls". REDUCE THESE UNPROFITABLE NUISANCE CALLS!

BUY THERMOLOKS NOW!*

- You make extra profit *NOW*
- You stop unnecessary service calls *LATER*

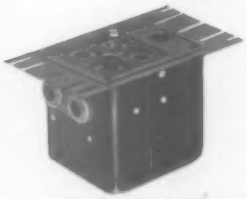


Thermolok will not solve all your problems this fall . . . you may need a Transformer, and need it right away.

BUY ADAPT-O-TRANSFORMERS!*

The ONLY Universal Transformers with UL Approval

- 3 Sets of terminals
- Takes standard Rajah fittings
- Eliminates Temporary hook-up



110 & 220 V.

*(It's good business to carry THERMOLOKS and ADAPT-O-TRANSFORMERS in your service trucks at all times. You will make extra profit and your customers will thank you.)

ASK YOUR JOBBER!

THERMOLOK Manufacturing Co., Inc.
1099 Tulip Ave., Franklin Square
Long Island, New York

Toridheet's factory-assembled Furnace is equipped with a wall-flame Oilburner

TORIDHEET 200-R1 series is a fully-packaged Loboy basement furnace unit, equipped with a wall-flame oilburner, and available in 85,000 and 105,000 Btu capacities.

Some of the features in this factory-assembled unit include wired oil control assembly, patented Toridheet airinator valve, deluxe thermostat, combination fan and limit control with summer switch, adjustable leveling legs and a blower sized for addition of cooling.

Made by: Toridheet Div., 16025 Brookpark Rd., Cleveland 35, Ohio.

Wisconsin two-stage pressure Burner produces firing Rates up to 40 gph

WISCONSIN's two-stage gun-type oilburner is available in models with from 3 to 40 gph firing rates. On start-up the combustion chamber is preheated wih low fire, with the Hydro-motor automatically changing air in accordance with firing rates. On burner shut-down, the air damper partially closes to minimize chimney draft and allow the chamber to remain hot. Proper sizing of firing rates is suggested to produce constant burner operation.

The burner provides control of heating and processing loads with gradual change of firing rates. The Hydro-motor admits 1/3 to 2/3 of rated capacity on low fire.

Made by: Wisconsin Burners, Inc., 2720 Emil St., Madison 5, Wis.

Zone-a-Matic packaged boiler Unit's Design aims at smokeless Combustion

ZONE-A-MATIC, compact hot water boiler, incorporates an over-all design described as resulting in smokeless combustion. The design produces what is called an intensified flame pattern to completely consume fuel particles in the combustion chamber and prevent unburned fuel particles entering the flame passage. This feature now is standard in all units in the Edwards Zone - A - Matic basebard heating system.

An associated advantage of the design results in a high degree of rumble supression, according to the manufacturer.

Made by: Edward Engineering Corp., 101 Alexander Ave., Pompton Falls, N. J.

More Money

FOR YOU IN THIS

NEW MARKET

Autopulse has been vigorously promoting Lifters for mobile homes since August, 1958. Consistent advertising started then, and is continuing. It appears in:

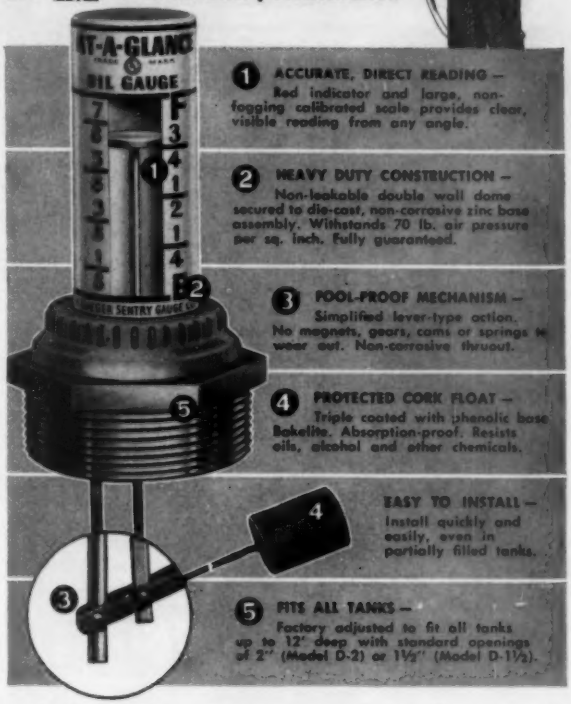
- TRAILER TRAVEL
- MOBILE HOMES
- TRAILER DEALER
- TRAILER TOPICS
- TRAILER PARK MANAGEMENT

No other Lifter line gives its dealers this kind of support. No lifter but Autopulse is getting known in this brand new market.

Cash in — with Autopulse! Write for full information.

Electric
AUTOPULSE
Division
WALBRO CORPORATION
Cass City, Michigan

Here's why *Sentry*
AT-A-GLANCE
TANK GAUGES
are tops in sales and performance



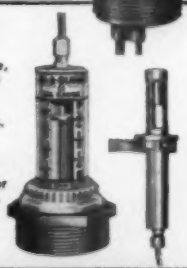
1. **ACCURATE, DIRECT READING** — Red indicator and large, non-fogging calibrated scale provides clear, visible reading from any angle.
2. **HEAVY DUTY CONSTRUCTION** — Non-leakable double wall dome secured to die-cast, non-corrosive zinc base assembly. Withstands 70 lb. air pressure per sq. inch. Fully guaranteed.
3. **FOOL-PROOF MECHANISM** — Simplified lever-type action. No magnets, gears, cams or springs to wear out. Non-corrosive throughout.
4. **PROTECTED CORK FLOAT** — Triple coated with phenolic base Bakelite. Absorption-proof. Resists oils, alcohol and other chemicals.
5. **EASY TO INSTALL** — Install quickly and easily, even in partially filled tanks.
6. **FITS ALL TANKS** — Factory adjusted to fit all tanks up to 12" deep with standard openings of 2" (Model D-2) or 1½" (Model D-1½).

Fastest selling in the industry, Sentry AT-A-GLANCE gauges are recognized for their superior qualities of accurate measuring, clear visible reading, rugged but simplified construction and long-life durability. They are fully guaranteed and "listed as standard" by Underwriter's Laboratories. Complete Literature, Sales Brochures and Counter Displays available.

SENTRY Superior Quality THERMA-GAUGE

Similar to the standard AT-A-GLANCE gauge above, but features a solid red thermometer type indicator and a two-piece die cast plug-nut assembly which permits simplified tank installation.

STOVE AND SPACE HEATER GAUGES
Several models with accurate, easy-to-read indicators to fit all tanks. Also models for small tanks such as power mowers and outboard motors.



REMOTE READING TANK GAUGES
Several models for outdoor reading of levels in tanks indoors, underground or at delivery fill pipe.

KRUEGER *Sentry* GAUGES
GREEN BAY • WISCONSIN

Tuckoil & oilheat

AIR-EASE

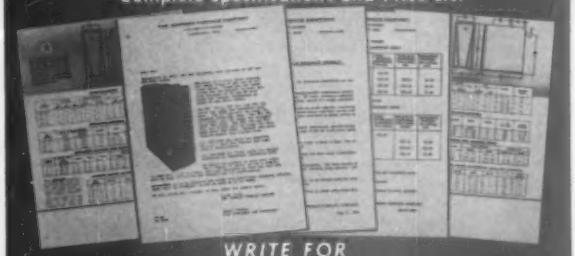
TRADE MARK

NOW READY

SEND TODAY FOR THIS
COMPLETE INFORMATION ON THE

AIR-EASE
GAS AND OIL UNITS

A useful sales tool — Attractively colored
Complete Specifications and Price List



WRITE FOR

Information and name AIR-EASE *of nearest distributor*

THE JOHNSON FURNACE COMPANY
2129 WEST 117th STREET, CLEVELAND 11, OHIO

White-Rodgers oilburner Control features a shortened time Cycle

WHITE-RODGERS TYPE 611-1 constant ignition oilburner control features a shortened time cycle that removes the control's safety switch from the circuit in about 30 secs. after flame is established. The shorter timing blocks the safety switch from unnecessary lock-outs and protects against improperly heated warp switches due to too-high line voltage.

The new control's relays use a coil design and contact structure which are expected to add 10% to the life of the control.

Made by: White-Rodgers Co., 1201 Cass Ave., St. Louis 6, Mo.

Mercoid's new pressure Control is small in Size, light in Weight

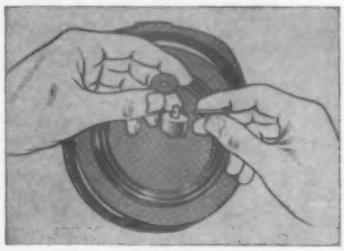
MERCOID'S Type AP-153 pressure control is for applications involving air or gases not injurious to steel or silver solder. Small in size, 4⅛" by 3⅛" by 2⅞", and weighing only 1¾ lbs., the control features external adjustment, repetitive trip point, visible calibrated dial with pointer, visible hermetically-sealed mercury contact.

The control's adjustable operating range is 1 to 20 psig; fixed differential is 0.5 psig, maximum pressure, 30 psig.

Made by: Mercoid Corp., 4201 Belmont Ave., Chicago 41, Ill.

Walker pre-balanced draft Regulator has Pick-Off to make Adjustment easy

PICK-OFF simplifies setting of Walker's new pre-balance draft regulator. The vane-adjusting feature provides precise settings merely by adding or picking off one or more counterweight discs on the back of the damper vane. The regulator provides an overall range of obtainable draft values from .005 to .15" water column. The control features a rigid, cast aluminum frame and die-formed aluminized steel damper and parts.



Each regulator is pre-balanced by Walker for exact equilibrium of the damper's weight between the hinge pivots. Made for smokepipe sizes from 6" to 20".

Made by: Walker Mfg. & Sales Corp., 1705 Penn St., St. Joseph, Mo.

Hydrovalve's CONTROLLED TENSION
TERMINALS
FOR OIL BURNERS!
It's easy
to service the hard-to-get-at Ignitors . . . because Hydrovalve's Controlled Tension Terminals snap on easily . . . for strong, positive connections. Never too tight or too loose.
Hydrovalve's CONTROLLED-TENSION TERMINALS —
Are made of nickle-plated spring-tempered brass.
Have a unique double spring grip which prevents loose connections for greater conductivity.
Save time! Wire ferrules are designed for easier crimping and positive grip to resist pull exerted during installation or removal.
Hydrovalve's Terminals are packed 50 to a jar.
Hydrovalve Co. 1319 Utica Ave. Brooklyn 3, N. Y. BUckminster 4-1330
Remember—
YOUR OIL BURNER SUPPLY JOBBER CARRIES A COMPLETE LINE OF Hydrovalve's ENGINEERED FOR REPLACEMENT PARTS AND TOOLS! See him Now!

WALKER
34 (Balanced)
DRAFT REGULATOR

• Even more sensitive and dependable than its famous forerunner, the Type 34, this *improved* model, WALKER BALANCED TYPE 34, is *pre*-balanced — *at the factory* — for perfect sensitivity to draft variations. And the BALANCED 34 *stays* balanced — *permanently!*

The new *"Pick-Off" Draft Adjustment* makes precision setting of the BALANCED 34 as easy as picking up a stack of coins! Just pull out cotter pin (above) and add or remove as many pick-off counterweight discs as needed to set the BALANCED 34 exactly for particular draft conditions. *No moving parts to corrode or jam, so unit is always easy to adjust. The WALKER BALANCED TYPE 34 gives you finer, foulproof adjustment to closer limits over a wider range!*

The BALANCED 34 also boasts handsome, newly designed frame, improved gate stop to soften closure noise, and enclosed knife-edge life-time pivots.

CHECK THESE BALANCED-34 FEATURES:

- Pre-balanced damper for precise equilibrium, maximum sensivity to draft change.
- New "Pick-Off" adjustment for fast, fine, foulproof, wide-range setting.
- No moving parts to corrode or jam.
- Enclosed knife-edge pivots for life-long sensitive service.
- Heat- and corrosion-resistant vane of finest aluminized steel.
- Improved vane-stop to soften closure noise.
- Newly designed light, durable aluminum frame.

WRITE TO WALKER NOW at the address below for full details on the new BALANCED 34 and for full catalog of WALKER Draft Control products.

ROYAL PURPLE Regulator for smaller central heating plants

SHUR-FLO Inducer-Regulator for gas, oil and solid-fuel plants

JUNIOR LINE for central heating budget control

TYPE BB commercial and industrial control

DOUBLE SWING for gas-fired equipment

VENTURI CAP for heating and ventilating

WALKER MANUFACTURING AND SALES CORP. 1750 Penn St., St. Joseph, Mo.

TWO NEW OIL FURNACES

MODEL U-OB

MODEL CF-OB

NEW! UPFLOW MODEL U-OB

60" low x 20"-27" wide x 32½" deep

4 sizes: 84,000–95,000–112,000–140,000 Btuh

This brand-new oil-fired winter air conditioner is shipped completely factory-assembled and wired, with burner installed. Burner and controls are completely enclosed in an attractive cabinet that's so compact you can install it almost anywhere—basement, utility room, game room, hallway, alcove.

The small size is made possible by a new-type sectional heat exchanger that gives more heating surface in less space, extracts maximum heat—and gives *you* a strong fuel-economy sales story. Both the primary control—with flame-sensing device in the burner blast tube—and the fan-and-limit control are factory-connected to a single Central Control Station.

NEW! COUNTER-FLOW MODEL CF-OB

65" low x 20"-24" wide x 32½" deep

3 sizes: 84,000–95,000–112,000 Btuh

Here is the best-engineered counterflow unit made today.

For example, a new-type sectional heat exchanger provides maximum radiation surface in minimum space. The new Central Control Station handles *every* operation of the furnace automatically. The new primary safety control is factory-mounted right in the burner blast tube.

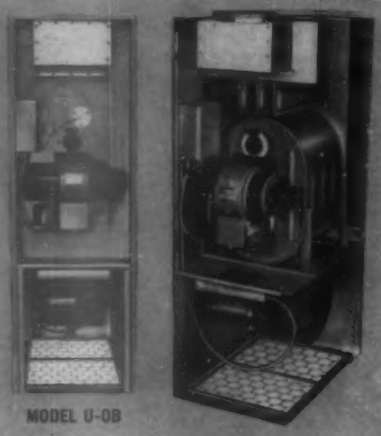
Both the U-OB and the CF-OB are equipped with the proven American-Standard "ACD" burner, which has earned a reputation among dealers as "the most reliable burner on the market." These two units are *all* you need to handle 95% of your oil-fired installations—basement, utility or counterflow. (If you need larger capacity, a two-furnace installation has definite advantages.) Units convert easily to gas . . . cooling is easily added. Get the spec sheets and the low competitive prices at your American-Standard distributor today.

AMERICAN-Standard

AIR CONDITIONING DIVISION

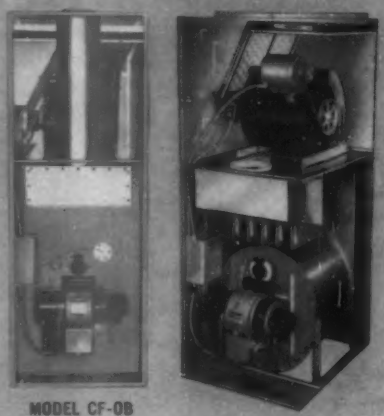
Elyria, Ohio

FROM AMERICAN-STANDARD



MODEL U-OB

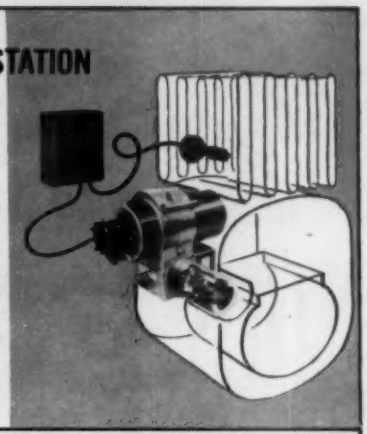
When the lift-off panels are removed from the furnaces (left), you can see how these units come from the factory fully assembled and pre-wired, with burner installed—ready to hook up and start up. The cutaway views (right) show the well-engineered compactness of these full-capacity units. Note the built-in filter frames on both units.



MODEL CF-OB

NEW CENTRAL CONTROL STATION

In these new units, the primary combustion control and the fan-and-limit control are factory-connected to a Central Control Station. Both controls are "fail-safe" type for complete safety. If the burner fails to ignite, the Combustion Thermostat in the blast tube of the burner signals the Central Control Station, and the burner is instantly turned off. The fan-and-limit control uses a new-type capillary tube sensing device that gives faster, more accurate and safer response.

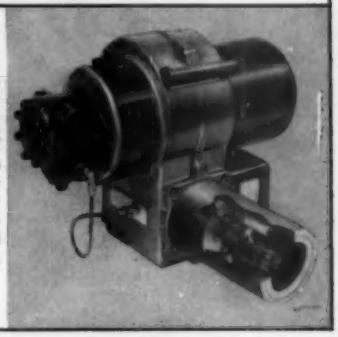


NEW HEAT EXCHANGER

The new, more compact multi-section heat exchanger has amazingly large heating surface for maximum heat transfer . . . occupies much less space than drum-type heat exchangers. And dealers who've seen these units are really impressed with the low draft loss through this new heat exchanger—which assures outstanding operation.

FACTORY-INSTALLED AMERICAN-STANDARD "ACD" BURNER

The "ACD" burner is hanger-mounted and fully insulated from the furnace. Tens of thousands are now in service—and dealers report it's the most reliable burner they've ever handled. Removable inner assembly and snap-in electrodes pull out without removing the burner. Electrodes, motor, fuel pump and transformer are standard parts, available anywhere.



MODEL	RATINGS			DIMENSIONS		
	Btuh capacity at bonnet	cfm rating	actual firing rate (gph)	height	width	depth
UTILITY						
U-84-OB ▲	84,000	905	.75	60	20	32½
U-95-OB	95,000	1025	.85	60	20	32½
U-112-OB	112,000	1205	1.00	60	24	32½
U-140-OB	140,000	1510	1.25	60	27	32½
COUNTERFLOW						
CF-84-OB ▲	84,000	905	.75	65	20	32½
CF-95-OB	95,000	1025	.85	65	20	32½
CF-112-OB	112,000	1205	1.00	65	24	32½

▲ These models also available with direct-drive blower

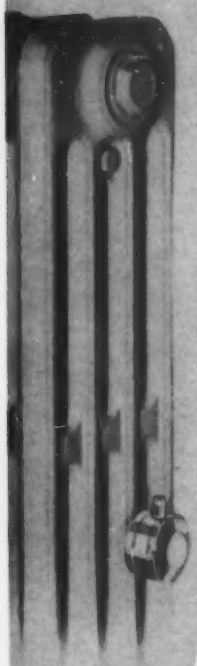
AMERICAN-Standard
AIR CONDITIONING DIVISION

American-Standard and Standard® are trademarks of American Radiator & Standard Sanitary Corporation

fuel oil & oilheat

with steam heat...

the SECRET is in the VENTING



The faster you vent air out of radiators . . . the faster you get heat into radiators . . . this is the secret of efficient steam heating, and why Gorton Valves provide much larger air outlets for venting air faster.

With Gorton Valves you save on fuel every time the thermostat calls for heat, as Gorton Valves make radiators heat fast with ounces of vapor instead of pounds of pressure.

FAST VENTING VALVES

To make all radiators heat quickly and evenly, there's a fast venting Gorton Valve that's just right for every radiator. Available in 5 sizes for radiators and 2 sizes for mains. A correctly sized Gorton Valve installed on each radiator provides fast, even, comfortable heat in every room.

For steam heat that can't be beat, insist on Gorton Valves. Available from leading wholesalers everywhere.

FOR EVERY STEAM HEATING SYSTEM

GORTON VALVES

Cranford, New Jersey
ESTABLISHED 1887

'THE SURE CURE FOR COLD RADIATORS'

Roberts-Gordon announces complete Line of oilfired, forced warm air Furnaces

EIGHT MODELS comprise the Roberts-Gordon line of oilfired warm air furnacse, available in Lo-Boy and Counterflo models in capacities from 75,000 to 160,000 Btu/hr output.

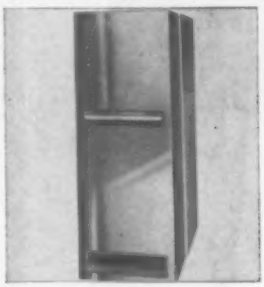
The GLO Lo-Boy series are designed for basement installation; availiable in four sizes from 90,000 to 160,000 Btu/hr output. The GHO Hi-Boy series are designed for use where floor space is at a premium; two models offer capacities of 75,000 and 90,000 Btu/hr output. Counterflo furnaces are designated GCO series for utility room installation; two sizes have capicities of 75,000 and 90,000 Btu/hr output.

All units feature an advanced design oilburner, high-capacity blowers, wrap-around heat exchanger and precast refractory combustion chamber.

Made by: Roberts-Gordon Appliance Corp., 44 Central Ave., Buffalo 6, N. Y.

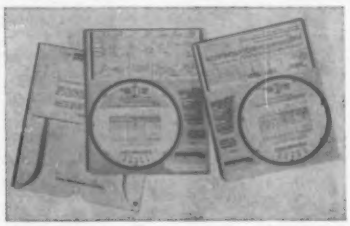
Stewart-Warner compact Furnaces combine Capacity with space Saving

"MY" SERIES FURNACES announced by Stewart-Warner are factory-assembled unit designed for quick installation, combining capacity with space-saving. Oilfired units, available in counterflow, up-flow, basement and horizontal models, are rated at 100,000 Btu/hr output. Units incorporate a 10-year guaranteed heat exchanger made of heavy steel in a heat-saving accordion design.



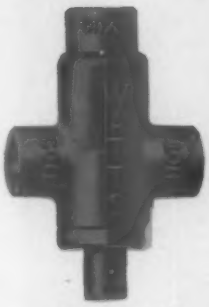
Made by: Stewart-Warner Corp., Heating & Air Conditioning Div., Labanon, Ind.

Ductamatic, shown right, is a circular slide rule for sizing residential heating and/or cooling air distrbiution systems, usable on new or existing systems. Setting a single arrow allows the user to read sizes directly from the face of the rule. Ductomatic takes into consideration the equivalent length of all normally used fittings. Data used in developing the rule includes National Warm Air Heating and Air Conditioning tables. The device comes in a varnished tag board envelope, punched for insertion in 3-ring binders. Priced $1 each.

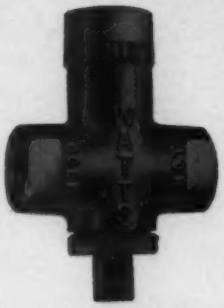


Made by: American-Standard Air Conditioning Division, 40 West 40th St., New York 18, N. Y.

Now... a complete line of dependable low-cost water tempering valves



No. 70 ½″
Sweat Connections



No. 70T ½″
Threaded Connections

No. 70 ¾″
Sweat Connections

No. 70T ¾″
Threaded Connections

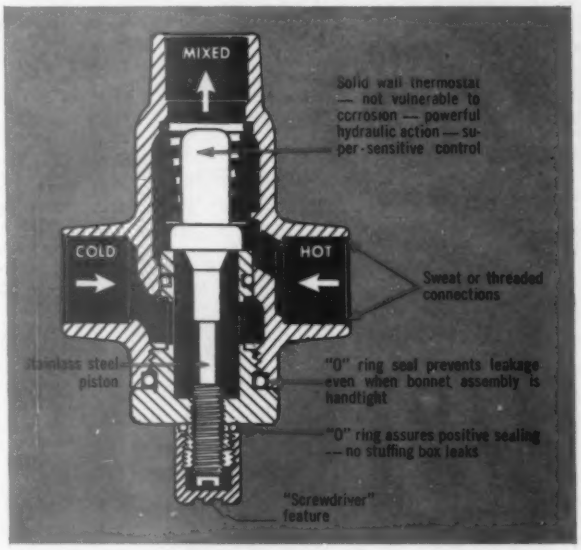
You can meet all installation requirements with the new Watts Series 70 Tempering Valves. It's the broadest line available today — ½″ and ¾″ sizes, with sweat or threaded connections.

The hydraulically operated thermostat is extremely sensitive to temperature changes. Its thermostatic force is so powerful that it positively shuts off cold water completely when there is an excessive demand for hot water, thus delivering full rated capacity.

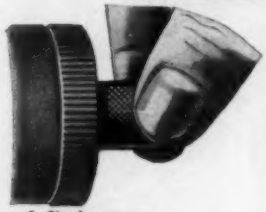
Flow variations have limited effect on the built-in accuracy of this unique design, assuring constant temperatures at all fixtures. These valves have unusually high capacity for their size.

Maintenance is simple. The thermostatic assembly is easily removed and replaceable as a unit. The internal design is clean and simple and can't stick. Valve bodies are of red bronze (85% copper content) — construction that is recognized and required to resist all corrosive domestic hot water conditions. No. 70 furnished in ½″ and ¾″ sizes with sweat connections. No. 70T available in ½″ and ¾″ threaded connections. Adjustable from 120° to 160°F. (Also inquire about the new 1″ and 1½″ No. 170 Tempering Valves, soon to be introduced.)

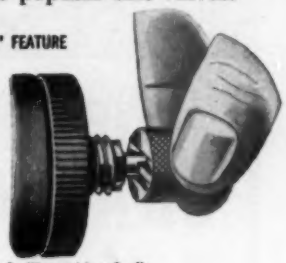
For **accurately** delivered tempered water . . . for **complete** customer satisfaction with price and service, specify one of these popular size valves.


MIXED
Solid wall thermostat — not vulnerable to corrosion — powerful hydraulic action — super-sensitive control
COLD
HOT
Sweat or threaded connections
stainless steel piston
"O" ring seal prevents leakage even when bonnet assembly is handtight
"O" ring assures positive sealing — no stuffing box leaks
"Screwdriver" feature

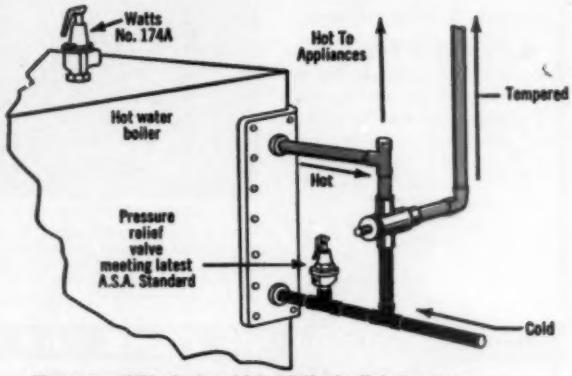
HANDY "SCREWDRIVER" FEATURE



1. Simply unscrew seal cap and loosen check nut



2. "Screwdriver Cap" fits head of adjusting screw



We recommend this simple, quick installation to eliminate unnecessary labor and fittings. Position of valve permits easy, visual adjustment.

Be sure ... Use

WATTS

Protection and Control Specialties

Watts Regulator Company, Lawrence, Mass.

fuel oil & oilheat

PRINTED FORMS
For Immediate Shipment

Check items you are interested in. Attach to your letterhead, mail for FREE SAMPLES:

- ☐ Fuel Oil Order
- ☐ Phone Call
- ☐ Interoffice Correspondence
- ☐ Heating & Burner Material
- ☐ Survey Sheets
- ☐ Service Record Cards
- ☐ Driver's Route Cards
- ☐ Petroleum Price Cards
- ☐ Inspection Information
- ☐ Service Order
- ☐ Service Dept. Record
- ☐ Delivery Record
- ☐ Servicemen's Daily Report
- ☐ Degree Day Cards
- ☐ **Metered One-Time Carbon Delivery Tickets** *(Truck—Bulk Plant—Gas Pump)*

My Name .....

Company .....

Street .....

City .....State .....

DEGREE DAY SYSTEMS
39-30F 58 ST., WOODSIDE 77, N. Y.

Oilheating display down under.

Letter to the Editor

N. V. HOLYOAKE & CO., LTD.
Wellington
New Zealand

Editor:

We are enclosing photographs of our exhibit at this year's Industrial Fair in Wellington, New Zealand. This, we hope, will be of interest to you coming as it does from the other side of the world. You will note it is based on the model display featured in your October issue of last year.

Oilheating is comparatively new in this country and because of the lack of local background knowledge we have to look elsewhere for help. Every month we look forward eagerly to receiving FUELOIL & OIL HEAT and we wish to take this opportunity to express our gratitude for the many points we have picked up from the pages of your publication.

Over the past five years we have installed several hundred oilburners, and encouraged by the obvious success of domestic oil delivery services in America (as outlined in your publication) we pioneered a similar service here three years ago. This was the first domestic oil-tanker service in New Zealand.

We are now installing Printo Matic Meters as the result of information gleaned from your magazine—another first in New Zealand.

N. V. HOLYOAKE
Managing Director

❖

William Feick, Jr., formerly vice-president and treasurer, The Flintkote Co., New York, N. Y., has been elected vice-president in charge of sales for the Flintkote Division. He will supervise sales of the Van-Packer factory-built chimneys as well as other products made by the Division. *James E. McCauley*, formerly a vice-president and treasurer, Orangeburg Manufacturing Co., another Flintkote division, succeeds Feick as treasurer.

No Neater Meter!

New GRANCO® "K" Meters

- **for Speed!** Increased gpm's—faster deliveries . . . keeps your equipment rolling.
- **for Accuracy!** Smooth, non-pulsating, super-accurate performance at all viscosities gives you positive product control.
- **for Life Expectancy!** Outstanding new design increases meter life . . . adds profits to your operation.

Get the latest facts! Complete bulletins detailing the new GRANCO "K" Meters (Sizes 1¼" to 6") are yours for the asking. *Write today!*

Granco
METERS and PUMPS
GRANBERG CORPORATION
1308 SIXTY-SEVENTH ST. • OAKLAND 8, CALIF.

Chevy totes 2,000-gallon tank with least maintenance

"3 years, 29,000 miles, only $147.00 for maintenance—this sold us on Chevrolet."

—HARRY LEA, JR., PARTNER,
LEA'S BUTANE GAS COMPANY,
LEBANON, TENNESSEE

"Our experience with Chevrolet trucks dates back to 1951. At that time everyone but the local Chevy dealer said it was impractical to put a 2,000-gallon tank on a truck. We tried it (in fact, we were among the first to try this) and found the operation most satisfactory.

"This truck operated for 3 years—went 29,000 miles—and during this period we spent only $147.00 for maintenance. The engine, by the way, operated constantly and had far more usage than the mileage would indicate. This sold us so we have used Chevrolets since that time."

Chevy, you'll find, is winning a lot of new boosters among fuel distributors for a number of good reasons. Reasons like money-saving power, for instance. Chevrolet for '59 offers newly improved valve-in-head 6's that nurse a gallon of gas like nothing in trucks has before. Or big V8's for every Series that include the shortest stroke design—the best saving design—in the field. And for the toughness that leads to low maintenance, Chevy's advanced chassis components are specially designed for the capacity to out-muscle the roughest kind of runs. For the *latest* in low-cost hauling equipment, see your Chevy dealer! . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

CHEVROLET

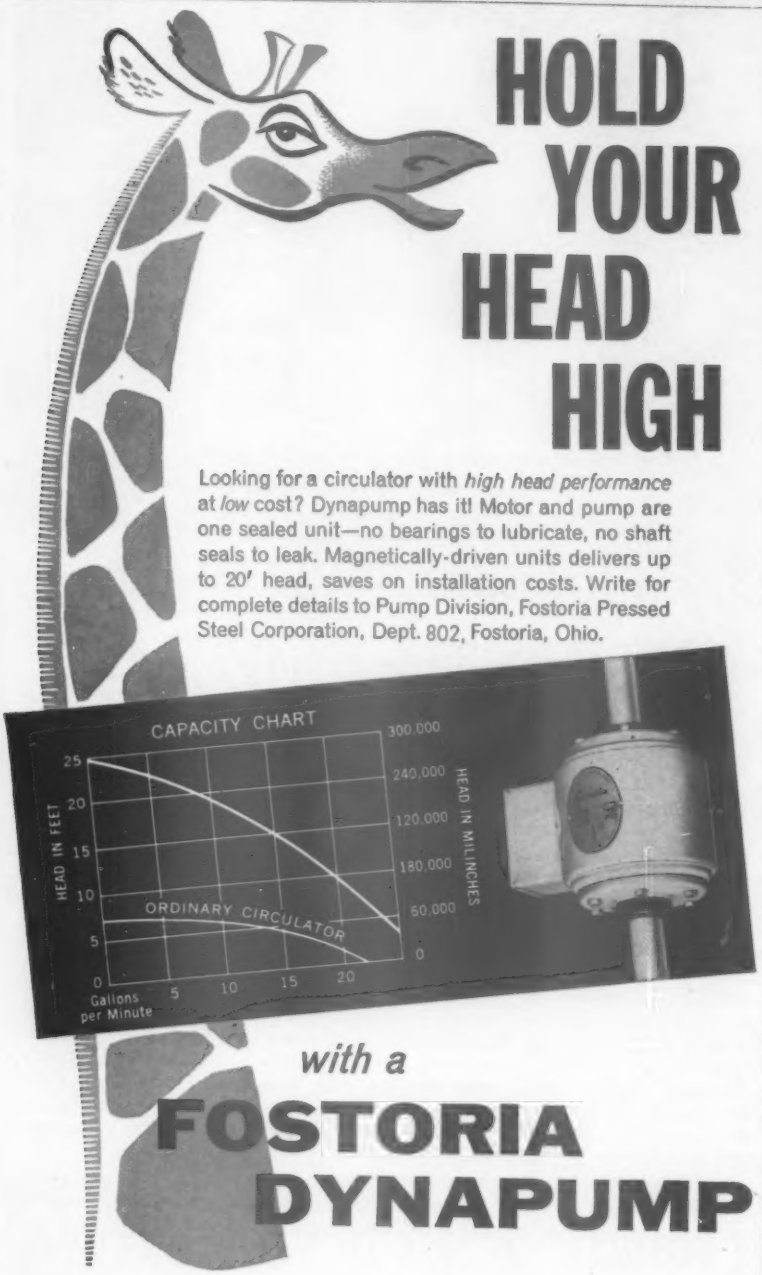
No job's too tough for a Chevrolet truck!

fuel oil & oilheat

General Filters expands its plant Capacity at Novi, Mich.

A NEW WING recently was added to the plant of General Filters, Inc., Novi, Mich. It stretches across three-quarters of the rear of the main building, increasing available space by one-third.

The company moved to the Novi location in 1953 and in 1954 built a Canadian plant at Scarborough, Ontario, a Toronto suburb.


HOLD YOUR HEAD HIGH
Looking for a circulator with high head performance at low cost? Dynapump has it! Motor and pump are one sealed unit—no bearings to lubricate, no shaft seals to leak. Magnetically-driven units delivers up to 20′ head, saves on installation costs. Write for complete details to Pump Division, Fostoria Pressed Steel Corporation, Dept. 802, Fostoria, Ohio.
CAPACITY CHART
HEAD IN FEET
HEAD IN MILINCHES
ORDINARY CIRCULATOR
Gallons per Minute
with a
FOSTORIA DYNAPUMP

Minneapolis-Honeywell names Manager for central Region

CENTRAL REGIONAL manager for Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., is J. A. DePuy. He succeeds Wesley R. Moore who is on special assignment as assistant to Honeywell President Paul B. Wishart.

DePuy with headquarters in Cleveland will supervise all sales and service activities for the company in a six-state area that includes Ohio and West Virginia and parts of Michigan, Pennsylvania, New York and Kentucky.

In the Mid-Atlantic region: Edward J. Klein has been named regional industrial manager with headquarters in Philadelphia; John J. Horner succeeds Klein as industrial manager in the Philadelphia branch office, and Carl F. Boehnlein has been assigned as the industrial manager of the Richmond, Va., branch office.

New Executives are appointed by Sid Harvey Organization

JAMES ALLEN has been named vice-president of Sid Harvey of Reading, Inc., Allentown, Pa., according to an announcement by Stephen R. Harvey, president of the parent organization.

Another appointment concerns Hal Tarry, now personnel manager, of Sid Harvey, Inc., Valley Stream, N. Y.

STEP UP BOILER PROFITS

Sell the Most advanced line...
Sell Crane Residential Boilers

Crane Sunnyday 15. Highly efficient, oil-fired boiler. Wet base construction, nine horizontal fire tubes... save up to 15% on fuel. Four sizes: 66,800 to 156,000 Btu net IBR rating.

Crane Sunnyday 5. Oil-fired boiler. Available in both steam and water. Wet base construction, vertical fire tubes and top smoke outlet. Six sizes: 70,500 to 219,000 Btu net IBR rating.

Commercial, Industrial Boilers. Adaptable to any fuel, convertible to any firing method! Crane commercial boilers are ideal for anything from large homes to department stores and giant hotels. Large-capacity boilers that may be used singly or in battery. From 168,400 to 1,823,000 Btu net IBR rating.

Crane Radiation. Every type for every installation. Crane Sunnybase panels, Sunnyray radiation and Compac radiators.

SEE YOUR CRANE REPRESENTATIVE TODAY FOR ALL YOUR HEATING NEEDS!

For a completely dependable installation, use CRANE QUALITY VALVES, FITTINGS, PIPE, TUBING AND CONTROLS.

STEP UP YOUR SALES WITH **CRANE®**

CRANE CO., 836 S. MICHIGAN AVE., CHICAGO 5, ILL.

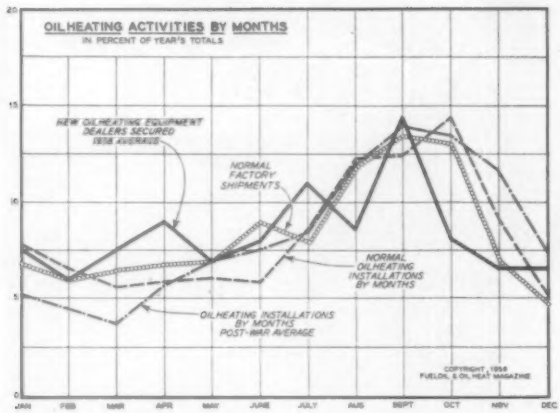
fuel oil & oil heat

"Summit Meeting" this Year? 〉 YES! ... in the Se

Sure Place to Meet Oil Heat Men at

PEAK Month for

Oilheating Sales:



Here's Your Opportunity to Influence Oilheating Men at their Buying Peak!

September is "Pay-Off Time" for FUELOIL & OIL HEAT advertising. It's the month you can expect your sales message to generate the most immediate action, and the time when our readers will buy in greatest volume. In September, manufacturers secure a peak of 14.3% of their year's new dealer and jobber customers, and ship a high of 13.3% of their year's total. During this top month, oil heat dealers install an average of 13.8% of their year's oilheating business, and secure about 10% of their annual "service call" income.

This is a strong sales year for oilheating—installations for the first half, are up 15% over 1958. It will pay you to use large, dominant space in this strongest sales month of a strong oilheating year!

September Issue of

at the SUMMIT of their Sales Year!

PEAK Month for

Reader Interest:

SEPTEMBER FUELOIL MANAGEMENT ISSUE

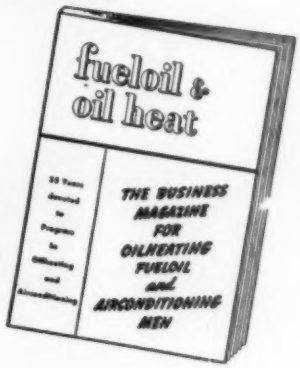
The September Issue will be of very special value to our Readers and Advertisers. It will have a large feature section on FUELOIL MANAGEMENT.

We'll report on two exclusive FUELOIL & OIL HEAT surveys of dealer operations. The first will be an analysis of the fueloil trucks and oilheating service trucks operated by 288 dealers, and will include data on sizes, model years, and types. For the second survey, we've sampled 4,000 dealers across the country, to obtain data of top value to the dealers themselves, and to manufacturers of fueloil handling equipment, materials, accessories, and supplies.

Oil Heat dealers have relied on FUELOIL & OIL HEAT's dependable statistical data for over 30 years, in making important decisions affecting their businesses. They gladly cooperate with this annual survey, knowing that the information they supply will establish a pattern against which they can measure their own operations. *This Special Issue is certain to deliver the close readership you want for your advertising!*

SEPTEMBER AD FORMS OPEN UNTIL AUGUST 10th

How Much Space May We Reserve for You?



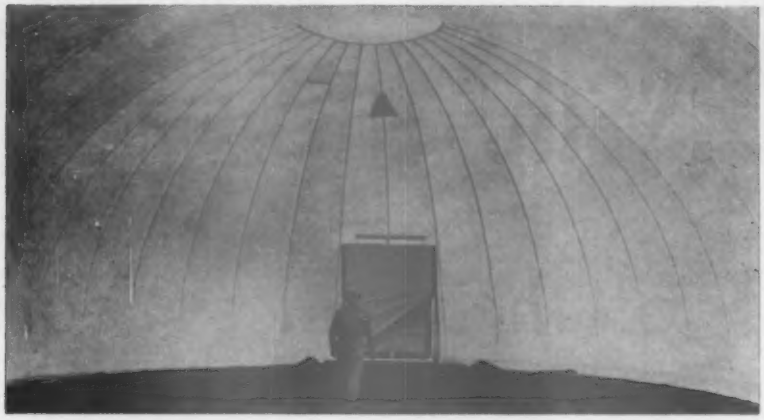
AUDITED PAID CIRCULATION ABC

MEMBER OHI BPA

HEATING PUBLISHERS, INC.

2 West 45th St., New York 36, N. Y. • (MUrray Hill 2-4786)
A. G. WINKLER, *Adv. Dir.* LEE STEEDLE, *Adv. Mgr.*
Eastern Adv. Mgr.: DICK RAYMOND
Midwest: Larry Alles, 224 So. Michigan Ave., Room 200, Chicago 4 (WAbash 2-9548)—*Pacific Coast:* Don Harway, 1709 W. 8th St., Los Angeles 17, Calif. (HUbbard 3-5141).

fueloil & oilheat



This "Airhouse" is in use at the Bayonne, N. J., refinery of Esso Standard Oil Co. Air pressure is the building's only support and before it is inflated it looks like a tarpaulin. The airhouse goes up in five minutes and a low-pressure blower outside keeps it constantly inflated. These airhouses have often been used by oil-exploration and drilling crews working in remote areas. This one is approximately 40 by 80 feet and will hold up to 900 drums of oil.

Gibson Refrigerator Co. moves to Perfection Industries Plant

CENTRAL residential airconditioning activities of Gibson Refrigerator Co. will be consolidated in the Cleveland plant of Perfection Industries. Both companies are divisions of Hupp Corp.

Gibson will continue to concentrate on room airconditioners and heat pumps at the Greenville, Mich., plant.

Milo Chavez has been appointed manager of the central heat pump and airconditioning department reporting to Carl W. Millsom, Perfection vice-president in charge of airconditioning, furnace and appliance sales.

Scully Signal Sales Co. formed in New York City

ORGANIZATION of Scully Signal Sales Co., 516 Fifth Ave., New York, has been announced by Frank P. Scully, Jr.

The firm will provide closer contact and more complete technical service to customers in the Mid-Atlantic and Midwestern areas.

Watts Regulator has Meeting for sales Representatives

SALES REPRESENTATIVES from every part of the United States and Canada gathered in Andover, Mass., recently for the week-long annual sales meeting of Watts Regulator Co., Lawrence, Mass.

George B. Horne, president; Robert H. Chaffee, sales vice-president; Wendell M. Dillon, engineering vice-president; and other Watts executives conducted the meetings.

A highlight of the meeting was a briefing on the significance of the new ASA requirements and the new FHA Minimum Property Standards as they apply to temperature and pressure relief valves for water heater protection.

FINENESS AND CAPACITY COMBINED IN COMPACT SIZE!

SETTE

MICROSTONE® ELEMENT **FILTERS**

MODEL MS-3 — Handles 100,000 BTU's, installed at tank or anywhere on line for medium to large oil burning units: much greater than other filters of similar size! Exclusive Microstone ceramic element traps all foreign matter to 1/10,000th of an inch — easily cleaned for re-use. All aluminum construction; easily disassembled without special tools; built-in shut-off valve and air vent; inlet and outlet ⅜" IPT. And the cost is low! $4.80 EACH

MODEL MS-3E — Even lower initial cost! Same basic construction as Model MS-3, but without shut-off valve and air vent! A real low-cost attraction! $4.00 EACH

SEE YOUR JOBBER — OR ORDER DIRECT! If he cannot supply you we ship postpaid anywhere in U.S.; normal discount in dozen lots.

SETTE PRODUCTS COMPANY
1241 HIGH STREET • OAKLAND 1, CALIFORNIA

Please send the following, postpaid:

_____ doz. Model MS-3; List $4.80 ea.

_____ doz. Model MS-3E; list $4.00 ea.

Name_____

Address_____

City_____ State_____

Export Div.: OCEANIC EXPORT CO. • 400 Montgomery St., San Francisco 4

WHISTLER

The only fill-signal you can install in existing systems without disturbing the present piping!

APPLIED MECHANICS COMPANY
381-389 CONGRESS ST., BOSTON 10, MASS.

the quality tells . . . the quality sells

JANITROL

QUIET...CLEAN...CAREFREE

Convertible to gas—adaptable for
Janitrol ADD-ON summer cooling

a new concept of QUIET performance
to help you sell and grow with

JANITROL

OIL-FIRED WINTER CONDITIONERS

Time was when you *had* to put up with noise and vibration in your oil-fired furnace installations. And then came this great Janitrol oil-fired winter conditioner line—and with it a whole new concept of quietness and automatic efficiency in performance!

Now noise is needless! Now you can provide gentle, *quiet* warmth (new fuel economy, too!). Do away with profit-draining service call-backs and complaints. These new Janitrols put the damper on noise so effectively you'll scarcely believe your ears when the powerful Jet-Omizer burner and floating blower and motor go into action!

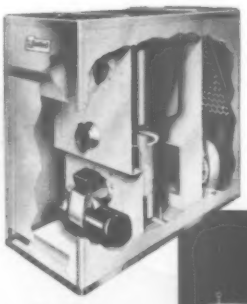
Their clean-lined beauty and compact design is easy on the eyes—saves space. And all models are designed for easy conversion to gas and addition of summer cooling.

Ask your Janitrol representative for all the facts on this great Janitrol automatic oil-fired winter conditioner line. Or, mail the coupon to us today. Get set to sell and grow with Janitrol!

JANITROL LOW-BOY MODEL OFLS-65 . . . a masterpiece of design, ideal for installation in basement recreation areas.

You can stake your reputation on

JANITROL® *Quality*



Janitrol Heating Heart . . . exclusive design, fabricated from full 14-gauge steel, all-welded construction. Far quieter, more durable and more easily accessible than ever before.

Jet-Omizer High Pressure Burner . . . Super-powerful to thoroughly atomize fuel and mix it uniformly with air for clean, complete combustion.

Compact, Insulated Cabinets . . . Save space. Insulated to minimize heat transmission and provide utmost quietness in operation. Lustrous baked enamel finish.

Adjustable Leveling Bolts . . . "Adjust-abolts" at corners of cabinet base simplify leveling the conditioner. Solid base plate on Low Boy adds rigidity, keeps out dirt and dust.

Factory Assembled . . . all models require only addition of burner, refractories and controls at the job. You save installation time and labor.

Fully Automatic Controls . . . The last word in convenience . . . Assure more uniform heating with maximum safety and economy for all conditions.

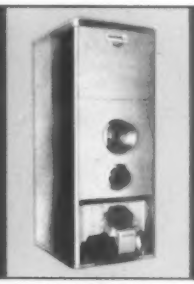
Pre-Fabricated Wiring Harness . . . Makes your installation job easier and faster, keeps you in the profit zone.

Models For All Needs . . . Btu. output at Bonnet from 84,000 to 250,000.

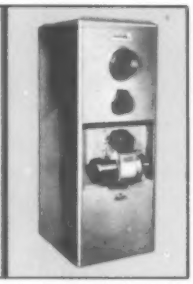
Adaptable for full-performance cooling with JANITROL ADD-ON COMPONENTS

Janitrol ADD-ON Cooling is **waterless**, requires only air and electricity for operation. Uses same ducts, blower and filters used for heating. May be installed with furnace, or any time later, to provide refreshing summer comfort—and more profits for you!

Janitrol HORIZONTAL Model OFLS . . . for space saving installation in attic, crawl space or basement. 84,000 to 250,000 Btu/hr. output.



Janitrol DOWNFLOW Model OFDS-65 . . . for perimeter heating systems. Compact, quiet, space-saving. Install in closet, alcove, utility room.



Janitrol HI-BOY Model OFVS-65 . . . especially designed for installation where floor space is limited—basement, utility room or closet.

Call WESTERN UNION Now!

Address Your Collect Wire to:

HARRY C. GURNEY, General Sales Manager
Janitrol Division, Surface Combustion Corp.
Columbus 16, Ohio (In Canada: Wire Moffat's Ltd., Toronto 15)

JUST SAY—"Rush me full details on Janitrol Select Dealer Program"

You'll do better by far as a . . .

JANITROL SELECT DEALER

WIRE COLLECT NOW for proof . . . and a preview of the profitable future that's yours to enjoy!

Diamond Fuel Co., Spokane, Wash., received first prize in the third annual Spokane area advertising and sales association competition. In the photo F. L. Croteau (left), president, Diamond Fuel, receives his plaque from William A. Marshall.

The company's television slide commercial won the award. Its theme was a soap-opera take-off of a doctor's daily life—to the householder (patient) with problems and the prescription was Diamond's heating products. Fast action slides of cartoon type characters portrayed the video, and soap-opera copy complete with organ music was used for audio.

John Wood Company realigns heater and tank Executives

W. GLENN OSLIN was named vice-president and general manager of the Conshohocken, Pa., factory, Heater and Tank Division, John Wood Co. M. N. McIlwain has the same position at the Division's Chicago plant.

Victor Mauck, Jr., was appointed factory manager of the Conshohocken plant.

Dealer Organizations to sell Bendix mobile radio Products

A NEW DEALER sales program for mobile radio products has been announced by H. C. Morgan, manager, Industrial Communications and Electronics Products Group, Bendix Radio Division. Qualified technical service dealer organizations will sell and service all Bendix mobile radio products instead of direct sales by company salesmen and manufacturers' representatives.

Heading up the new program is Bruce C. McCallum, manager, distributor-dealer sales. Also assigned to the program is G. L. Aldrich, distributor-dealer sales administrator.

A new advertising manager, R. M. Parks, has been appointed for the Industrial Electronics Products Group.

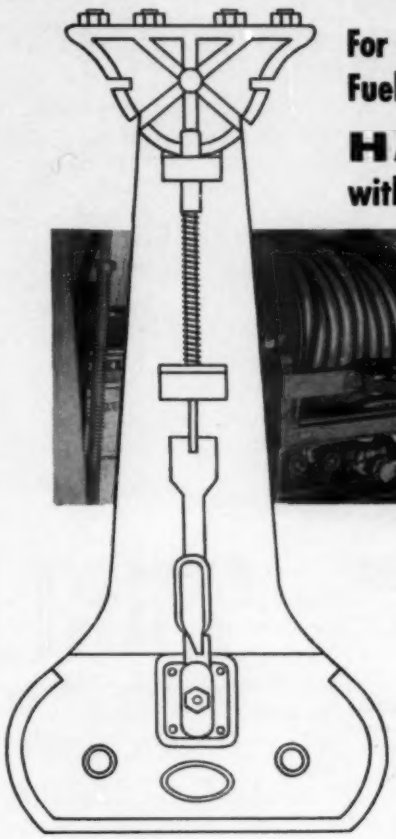
Rheem Distributor sponsors Tour of Plants for Dealers

HEATING EQUIPMENT CENTER, New Haven, Rheem distributor, and the Rheem Manufacturing Co. recently sponsored a three-day tour for 38 dealers from all parts of Connecticut.

The group traveled by Greyhound bus and first visited the New Castle, Del., plant where Rheem boilers and furnaces are made. The group went on to Sparrows Point, Md., and saw the manufacture of water heaters.

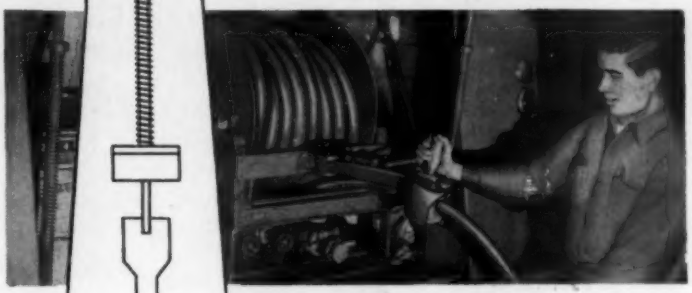
In addition, there was a sales meeting, attendance at a major league ball game and a guided tour of Washington, D. C.

Accompanying the dealers were the following Heating Equipment Center personnel: Sidney Horton, president; Fred R. Maretz, sales manager; C. W. Thomas; Ferd Equi; and Romeo Lieto.

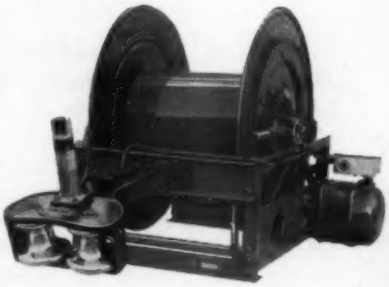


For Faster Fuel Delivery...

HANNAY Reels with GUIDEMASTER



For any pumping system . . . with any rewind power . . . Hannay hose reels with the Hannay Guidemaster will reduce delivery time, extend hose life, *cut operating costs!* Hannay reels give you fast, positive controlled rewind. Hannay Guidemaster permits left or right delivery and controlled, level rewinding with one hand operation.



See your Oil Equipment Jobber for complete information, or write direct for the Hannay Fuel Delivery Equipment Catalog.

Hose Reels by **HANNAY**

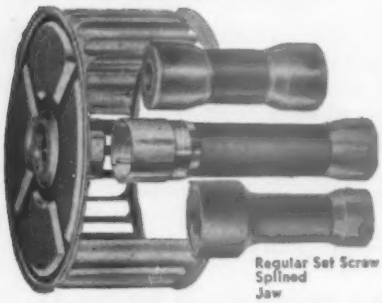
CLIFFORD B. HANNAY & SON, INC., WESTERLO, NEW YORK

QUALITY is our business .. without *any* compromise

AND ONLY Guardian

GIVES YOU ALL THREE —

1. FLEXIBLE COUPLINGS



Regular Set Screw Splined Jaw

Only Guardian gives you these features—

- **ROLL SPINNING**—Exclusive process joins all three components at one time—while in final operating alignment.
- **BRAIDED RUBBER**—Ground to absolute true concentricity. Furnished in BUNA-N TUBE and NEOPRENE COVER. Lateral and angular alignment requirements fully met.
- **ONE-PIECE DESIGN**—Minimizes assembly and handling costs. Made to exact lengths required.

Over 5,000,000 Guardian couplings are on original equipment. This is your assurance of highest quality and universal acceptance in the field.

2. OIL TANK VALVES

No. 1910 B

Check These Superior Guardian Features—

- Metal-to-metal seating.
- Highest quality machined bar stock.
- Greater wall and body strength.
- Fusible linkage available in all designs.
- Valve designs for every type of installation.

3. QUIK JOINT

Steel compression fittings for connecting steel pipe.

Patent No. 2,685,460

- Eliminates threading of pipe.
- Decreases cathodic corrosion and electrolysis.
- Guaranteed for pressure up to 2000 P.S.I.
- Allows 7° angular deflection.
- U.L. approved for oil and gas.

Write for free descriptive literature.

Guardian
PRODUCTS CORP.
COUPLING DIVISION

Dept. F-89 1215 East Second Street
MICHIGAN CITY, INDIANA

New Books for the Industry

Manager Selection, Education and Training by Willard E. Bennett, chairman, committee on training, American Petroleum Institute. Discusses development of management personnel at every level. Provides help in starting a manager development program or in appraising an existing one. Requirements of any type of office, department or company are covered.

Published by McGraw-Hill, 327 W. 41st St., New York 36, $6.00.

The Heating Ventilating Air Conditioning Guide (37th edition) has enlarged page size to accommodate illustrations, working charts and tables. The book is divided into 12 general sections and has five new chapters on: High Temperature Water Systems, the Heat Pump, Evaporative Air Cooling and Humidification and Snow Melting.

Published by the American Society of Heating Refrigerating and Air-Conditioning Engineers, 62 Worth Street, New York 13, N. Y., single copy, $12.00.

Fuel Oil Manual, 2nd edition, by Paul F. Schmidt: Book offers a practical working knowledge of the composition, properties, methods of storage, treatment and handling of various grades of oil. Contains a revised and expanded chapter on fueloil treatments.

Published by The Industrial Press, 93 Worth Street, New York 13, N. Y., $4.50.

Modern Air Conditioning, Heating and Ventilating, (third edition), written by Willis H. Carrier, Realto E. Cherne, Walter A. Grant and William H. Roberts. Contains additional material on comfort and heat transfer plus a revised and enlarged section on air cleaning. Following each chapter are problems dealing with the subject matter.

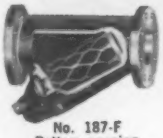
Published by the Pitman Publishing Corp., New York, $12.

A Contamination-Free Product

Protect pumps, meter, product

No. 187 Bottom Outlet Type

WITH OPW line strainers



No. 187-F Bottom opening type. 125 pound

No. 387 Top outlet type. 125 pound.

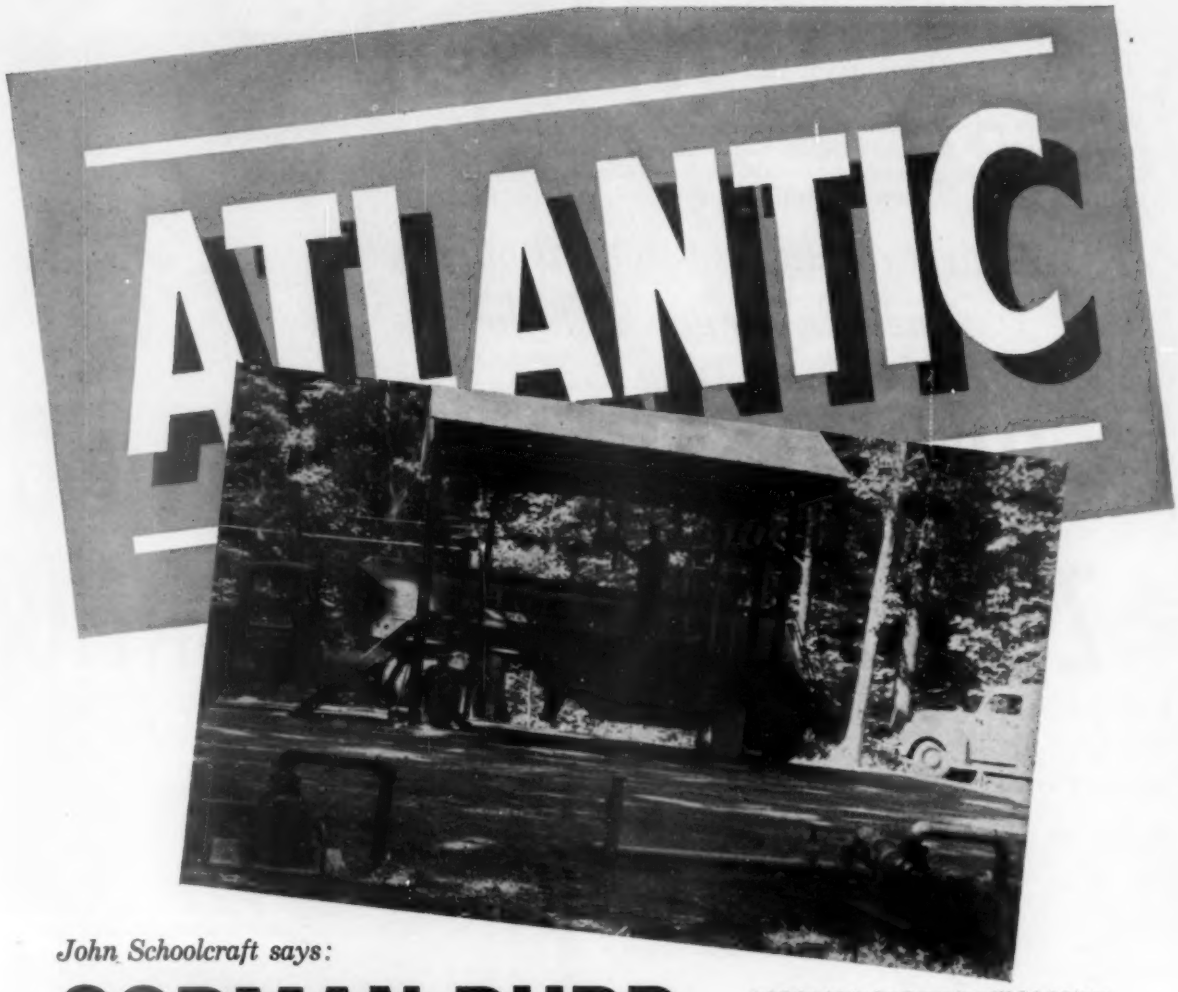
No. 387-F Top outlet type flanged. 125 pound.

No. 487-F Top outlet type flanged. 200 pound.

OPW Line Strainers remove dirt, scale, rust and other solids from liquids flowing in any pipe line system. This positive screening-out process protects and prolongs life of pumps, meters, loading valves, and mechanical equipment. Pipe-snug fit of cage and screen, plus larger than pipe size screen area, assures *free* and *complete* flow of product through strainer. Screens can be quickly and easily removed for periodic check-ups, cleaning and replacement.

Bulletin F-36R gives full details on sizes, styles, screen mesh, etc. Write today.

OPW CORPORATION
2723 Colerain Avenue PHONE
Cincinnati 25, Ohio KI 1-5400



John Schoolcraft says:

GORMAN-RUPP

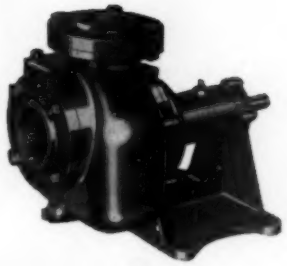
helps keep our trucks on the go!

Autocraft Sales Corporation, pioneer petroleum distributor, has several "firsts" to its credit, not the least being the first to sell Ethyl gasoline through a service station in New York State. Now a progressive distributor of Atlantic products in Schenectady, this firm has recently expanded its operations with a new branch bulk plant.

Says Mr. John L. Schoolcraft, Jr., Vice President and General Manager, "We chose Gorman-Rupp Pumps for their simplicity, ruggedness and for the fine service rendered by the Gorman-Rupp Dealer. They have lived up completely to our expectations, with no repairs needed in more than two years operation. Pumps are of key importance to us. These give our trucks the fast turn-around that spells efficiency."

Ask your Gorman-Rupp Distributor about the exclusive features of "O" Series Pumps. Safer—no check valve, and thus freedom from dangerous, high pressures from confined, heat-expanded liquids. More efficient—straight-in suction removes entrance restrictions, increases priming lift.

Installation details: Two Gorman-Rupp 03C-B Self-Priming Centrifugal Pumps serve three 20,000 gallon under-ground tanks. Maximum lift, 16 feet. Two #2 fuel oil tanks are manifolded. Second pump handles kerosene. 3" air eliminators, strainers, meters and loading assemblies.



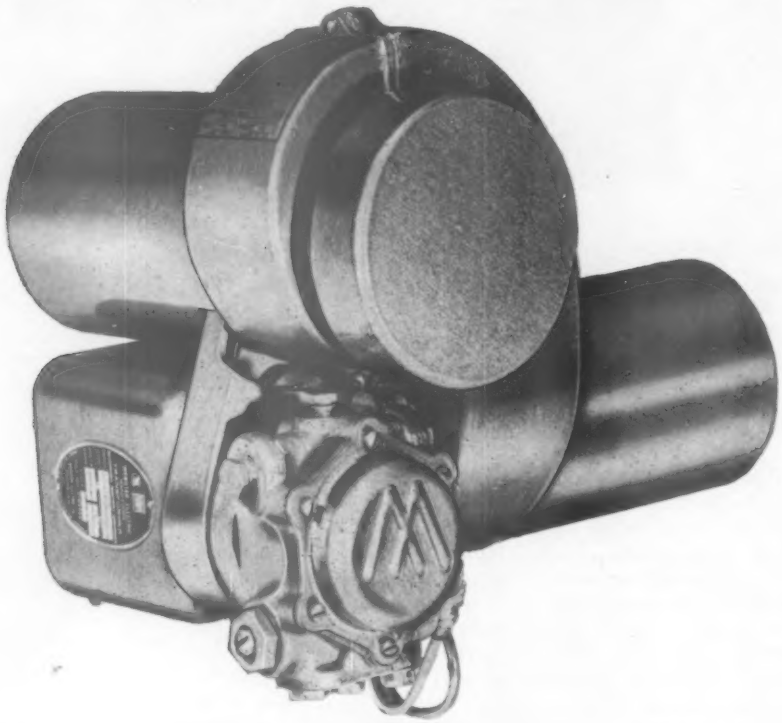
THE GORMAN-RUPP COMPANY

305 Bowman Street, Mansfield, Ohio

fueloil & oilheat

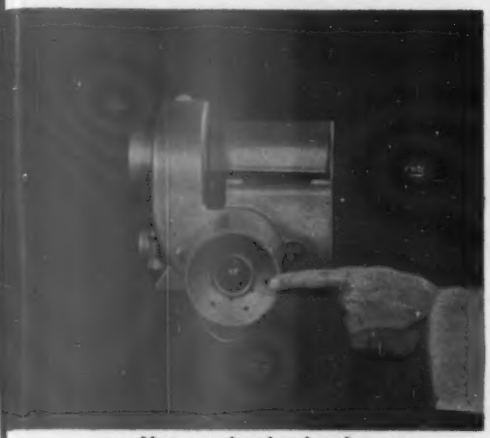
At first we didn't believe it ourselves!
Burning .65 gph with these results:

10% CO_2 AT FIELD SETTING
ZERO SMOKE/NO PULSATION

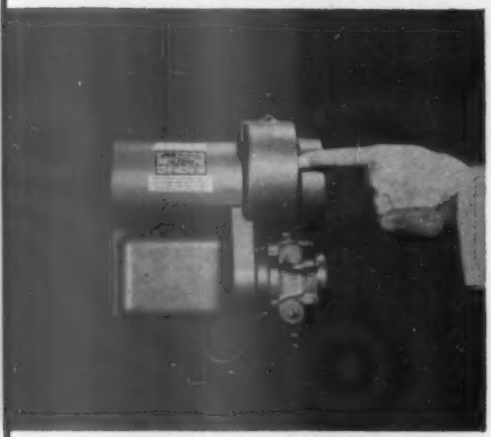


HI-PERFORMANCE

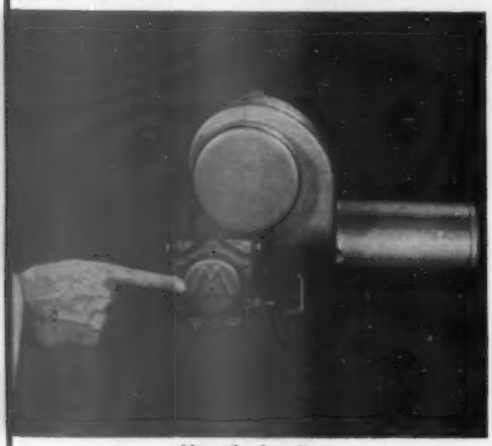
Check the possibilities of making it *your* big sales advantage!



New combustion head



New blower and motor



New fuel unit

It's one of those things you have to experience to *really* believe ... field results with the Lennox HI-PERFORMANCE oil burner are that startling! Because this is so important to you as an oil heating dealer, let's start at the beginning:

YOUR PROBLEM ... Competing fuels are making it tough for oil in the small and average home market. To stay alive and grow, oil burners have to offer economy, cleanliness and quietness. Until now, those virtues have been pretty scarce in the low-gallonage range.

THE ANSWER ... Progress is made only through change. So Lennox changed its concept of a high pressure oil burner. The first thing was to throw out the old practice of trying to put a low-gallonage combustion head in a conventional burner ... it never has been completely successful.

The problem called for a whole new burner ... a whole new arrangement of parts. We discovered that the burner's blower had to run faster. The fuel unit had to operate at a different speed. And a new combustion head had to be designed. The resulting Lennox HI-PERFORMANCE burner is new in looks, in size ... and most of all, in performance!

THE RESULTS ... Extensive field testing shows that the HI-PERFORMANCE oil burner is the answer to the challenge of other fuels.

Here is a clean, smokeless fire.

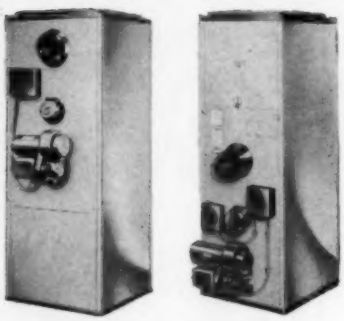
Here is absolute freedom from pulsation.

Here is dependability ... no start switch needed on motor; low maintenance.

Here is almost unbelievable efficiency.

Fuel savings of up to 50% have been reported where a furnace's good conventional burner has been replaced by a Lennox HI-PERFORMANCE burner! No other change was made in the heating system. A flue gas analyzer will show definite superiority of the HI-PERFORMANCE, but not as much difference as actual fuel bills indicate. Where, then, does the spectacular difference occur? It is in the unburned oil vapor which flue analyzers do not measure. Even with a good conventional burner, much unburned hydrocarbon escapes up the flue. But the Lennox HI-PERFORMANCE burner burns it.

Result: more heat for the money. The reason for this complete combustion is the perfect and unique mixing of air and oil by this entirely new burner.



TERRIFIC ON LENNOX OIL FURNACES

The HI-PERFORMANCE burner is standard equipment on the smaller Lennox furnaces where it is resiliently mounted for even greater quietness. A wonderful team for spectacularly successful oil heating. Conversion burners available.

OIL BURNER BY *LENNOX*

Lennox Industries Inc. founded 1895 • Marshalltown, Iowa • Columbus, Ohio
Syracuse, N. Y. • Fort Worth, Texas • Salt Lake City, Utah • Decatur, Ga.
Los Angeles, Calif. • Des Moines, Iowa • Lennox Industries (Canada) Ltd.
Toronto, Montreal, Calgary and Vancouver

Handbook of Air Conditioning, Heating and Ventilating, contains engineering data collected by Clifford Strock. Has been divided into eight main sections by subject: airconditioning, air handling and ventilation, fuels and combustion, heating and heat transfer, piping and plumbing, motors and starters, mathematical data, and terminology.

Published by The Industrial Press, 93 Worth Street, New York 13, N. Y., $15 ($17 in Canada and abroad).

Design of Air Conditioning Systems by F. W. Hutchinson. Provides methods for simple and effective utilization of data and design. Provides graphical solutions of equations to minimize mathematical work needed in solving design problems.

Published by The Industrial Press, 93 Worth Street, New York 13, N. Y., $7.

Air Conditioning and Refrigeration by William H. Severns and Julian R. Fellows. Supplies detailed descriptions of all types of heating systems, apparatus for winter and summer airconditioning, and the devices employed in control of humidity, temperature and pressure.

Published by John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, N. Y.

Summer Air Conditioning by Seichi Konzo, J. Raymond Carroll and Harlan D. Bareither: deals with modern methods of attaining comfortable working and living conditions. Intended as a textbook for airconditioning installers, the book represents many years of research inclimate conditions and cooling methods at the Research Residences maintained at the University of Illinois.

Published by Windsor Press, 200B East Ontario, Chicago 11, Ill.

Residential and Commercial Air Conditioning by Charles H. Burkhardt. Reviews the basic theory of refrigeration and airconditioning and supplies information on calculating heat gains, sizing the system, installing the unit and its various components, and installing and operating controls. It explains servicing after the unit has been installed.

Published by McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York 36, N. Y.

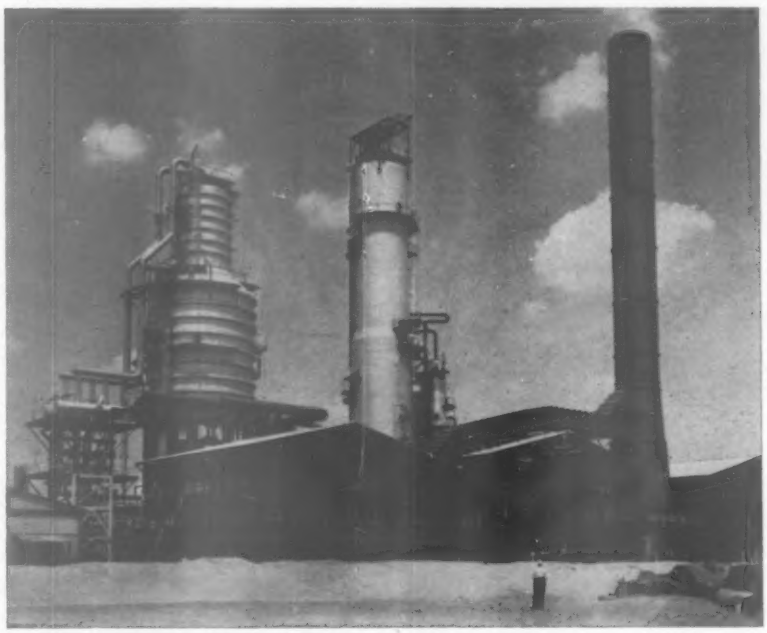
TO START INSTALLING SPEED-KLEEN FITTINGS

Your driver now has that extra minute you probably thought he couldn't spare during the peak cold weather. In many instances, all he needs to do is replace an ordinary fill pipe cap with a Speed-Kleen fitting. And thereafter, every delivery will be made easier, cleaner, faster, with delivery costs reduced as much as $5.00 per customer per year.

Deliver more oil with less work —make more profit on every gallon, by using Speed-Kleen nozzle tube and fill pipe fittings.

Don't continue losing profits, write or phone C.G. Eyster at

TIME SAVING FILLS, INC.
Phone York 6119
140 W. Market St., York, Pa.



World's largest crude oil pipe still has been built at Whiting, Ind., by Standard Oil Co. (Ind.). Design capacity is 140,000 barrels a stream day. Three huge furnaces supply the heat needed to distill the 140,000 barrels of crude processed daily.

August 27, 1959—Oil's 100th Birthday

A Great Day for Every Oil Man and Woman

100 years ago Colonel Edwin L. Drake drilled the first commercially successful oil well.

Of all the many uses for petroleum during the past century—as an illuminant, a lubricant, a source of chemicals—its most important use has been *as a source of abundant, low-cost energy.*

The progress of any nation can be measured by the amount of energy it consumes—for heat, light, transportation, agriculture, industry.

We in America produce and use 40% of all the energy consumed in the world—enjoy the highest standard of living in the world. More than two-thirds of our energy comes from oil and natural gas.

By August 27, 1975, America's energy needs will have doubled. Oil and natural gas will be called upon to supply two-thirds of this need—or 30% more energy than we now derive from all energy sources combined.

Every oil man and woman shares a quiet pride in the progress of our first century—and confidence in our ability to meet the challenges of the second.

As we look ahead to our second century, we join all other American business and industry in giving thanks for America's unique climate of freedom—from which all *past* success has come . . . on which all *future* success depends.

Committee on Public Affairs
of the
American Petroleum Institute
50 West 50th Street • New York 20, New York

15

REASONS WHY DUNKIRK BOILERS AND RADIATORS HELP YOU MAKE MONEY

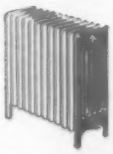
1 Economical to install and operate

2 Healthful draft-free warmth in any home design

3 Easily extended for future growth

4 'Round-the-clock temperature control

5 Warm floor for healthful play area



6 Clean, inconspicuous heat distribution

7 Whisper-quiet

8 Completely automatic operation

9 Boiler location to suit building

10 Smart looking jacket

11 A boiler for efficient use of every fuel

12 Cast iron boiler for lifetime service

13 Hot faucet water at low cost

14 Packaged for fast and accurate installation

15 Minimum service

Write for the DUNKIRK PROFIT STORY

DUNKIRK RADIATOR
CORPORATION
DUNKIRK, NEW YORK

MEMBER OF THE INSTITUTE OF BOILER AND RADIATOR MANUFACTURERS

Draft Problems

(*Begins on page 59*)

burner flame does not produce carbon monoxide, as a gas-burner flame.

Before it gets to the point of producing deadly carbon monoxide, an oil flame very sensibly shouts out a great warning by producing smelly material, oil fumes, and soot—both of which are kindly in preserving the health and saving the lives of occupants of oilheated homes.

It can't be said, unfortunately, that Big-Bill Gas-Heat was rescued from his moisture-laden house trouble by his brother, the oilburner dealer. The trouble could have been avoided, in its early stages, by the help of such things as special flue linings that heat up quickly, draft inducers, or possibly forced-draft gas-burner equipment with different devices to regulate the smokepipe draft. But the trouble had gone too far by the time the oilburner man gave it attention. Thoroughly disgusted with the damage done to his house by what he called "soaking wet gas heat," the homeowner had the conversion gas burner torn out.

Cooling Problems

FOR THE BENEFIT of the increasing number of fueloil and oilheating dealers who are selling summer airconditioning equipment, here are a few items which contain pertinent information about several phases of cooling installation and service.

There is no attempt to cover all the problems that will be encountered; instead the following deal with somewhat unusual situations which the typical cooling dealer will have to cope with at one time or another.

Volts and amperes are much more important in summer airconditioning systems than in oilheating systems.

NEW LOW COST HIGH POWER VACUUM

New hidden, patented filter*

—3 times more power

The new Premier Model P-950 Vacuum, with the new hidden, non-clog filter, is the only true low cost furnace cleaner. The hidden filter gives you more usable capacity than other vacuums twice the size. You can clean 4-5 home furnaces without emptying. Yet it is so small it fits easily on the floor of your car. Over 2000 in use. Other models range from 16-48 qt. usable capacity, including 3 in 1 units: wet or dry, blower or shoulder vac.

**patent number 2814357*

Model P-950

THE PREMIER COMPANY

Dept. 501, 755 Woodlawn Ave., St. Paul 16, Minn.
In Canada: 35 Gerrard St. West, Toronto 2

Attention: Gordon L. Bowman, V. P. & Sales Mgr.

Please rush me FREE details on Premier Heating, Air Conditioning and Industrial Vacuums. Thank you.

For FREE illustrated information fill in and mail request form today.

NAME_____

COMPANY_____

ADDRESS_____

CITY_____ STATE_____

ATTENTION!

Mr. Petroleum Distributor

Do you have any problems with respect to...

WORKING CAPITAL?

MANAGEMENT AND PERSONNEL?

SOURCE OF SUPPLY?

QUALITY OF PRODUCT?

We represent an integrated oil company who will consider establishing financial and supply relationships with independent fuel oil and gasoline distrbutors operating along the Atlantic Seaboard.

All replies will be treated in strict confidence and should be addressed to

C. P. A.
Box #1479
Fueloil & Oil Heat
2 West 45th St., New York 36, N. Y.

That's because the compressor motors of refrigeration systems are heavily loaded—the maximum loads of many of these motors are so great that increasing them only 10% to 20% results in motor breakdowns. On the other hand, many domestic oilburner motors carry only light loads, which could be doubled or tripled without causing motor trouble.

Add to these points the fact that the electrical load of a cooling system is by far the heaviest electrical load in many homes, and you can understand why oilheating men usually need additional information about volts and amperes when they start planning summer airconditioning systems.

To decide if the wires that run to a house, and through the house, are adequate for the additional load of cooling equipment, an oilheating equipment dealer needs all the help he can get from taking notes and going through figuring. He may need all the help he can get from the utility that provides the house with electricity. To top things off, he may need help from a phantom electrical load he rigs up on the job, and from instruments that permit him to read volts and amperes on the job.

In one instance, for example, a contractor knew that the cooling equipment he had in mind for the job would need 20 amperes from a two-wire, 230-volt supply circuit. The homeowner assured the contractor that the modern home had wiring adequate for the additional load. Skeptical, the contractor decided to make certain of this beforehand—by putting a phantom 20-ampere load on the installed supply lines and then testing for amperes and for voltage drop.

He brought to the job a batch of 600-watt, 115-volt heating elements having screw bases. Two of these, screwed into porcelain sockets able to withstand heat, and wired in series with each other, would form a set that could be connected across the 230-volt supply line to put a 1,200-watt test load on the line. Four such sets (eight heating elements all told) would put a 4,800-watt load on the supply line. The contractor reasoned that this load was close enough to the 4,600-watt actual load to produce meaningful figures from the on-the-job testing.

With this phantom load on the supply line along with other existing loads (the loads already on the line proved negligible), the supply line being tested showed a voltage drop of only four volts. At the electric meter or load-center end of the line the actual reading was 238 volts according to a voltmeter, whereas the actual reading was 234 volts at the load end of the line.

An ammeter was used to check the wattage ratings of the eight heating elements—to make certain that during the test the amperage was not below 20 amperes.

Manufacturers of airconditioning equipment can give figures on the minimum voltage suitable for compressor motors. A motor stamped for nominal line-voltage of 208 volts may be able, for example, to operate properly on line-voltage of 188 volts—as the absolute minimum. Comparable figures for different makes of equip-

"Instrument check-ups open the doors to profitable equipment sales."

FYRITE SERVICE KIT

. . . QUALITY INSTRUMENTS that Pay for Themselves

The FYRITE Service Kit provides a complete set of accurate, quality-built combustion-testing instruments at the lowest cost. It includes the FYRITE CO_2 Indicator which is unsurpassed for fast, accurate flue gas analysis; and also contains the popular DRAFTRITE Draft Gauge and the TEMPOINT 200°-1000°F. Dial Thermometer.

$52.30 FACTORY NET

Sold by Alert Heating Jobbers

BACHARACH INDUSTRIAL INSTRUMENT CO.
200 N. BRADDOCK AVE. • PITTSBURGH 8, PA.

Send FREE Bulletin on Profitable Uses of Service Kit

NAME_____

COMPANY_____

STREET ADDRESS_____

CITY & STATE _____

SK-27

GIBRALTAR OFFERS A
LOW PRICED-PACKAGED MULTI-ZONE CONTROLLED BOILER
OIL OR GAS FIRED

Recognizing the growing design problem of even distribution of heat, Gibraltar can now give you the new modern zone-control for hot water heating.

Depending upon the size of your home; be it split-level, ranch or multiple dwellings, Gibraltar can now give perfect comfort. Your recreation room, bedroom, or any individual room can be heated to your desired temperature.

Gibraltar

CORPORATION OF AMERICA, INC.

223 NORTH 9th STREET • BROOKLYN 11, N. Y.

EVergreen 4-7297

ment are not necessarily the same.

Wire size is one factor; length of run of the supply circuit is another. Wire size No. 10 may be large enough for a circuit 30-feet long serving a certain compressor motor. But the same motor may need a larger wire size, if the circuit is considerably longer than 30-feet. The phantom load method of testing has great practical value because it takes length of circuit run into account. It also takes into account additional variables that can cause lower or higher voltage-drop in the circuit. On particular installations, certain of these variables can be highly important.

Airconditioning equipment dealers who use positive testing methods, such as the phantom load method, can gain assurance about already-installed circuits. They therefore can install equipment under conditions which give their competitors much worry and doubt.

Amp-Protection important

MEN EXPERIENCED in domestic oilburner installation and service work, and now starting to do summer airconditioning work, need to gain knowledge about the special need for overload protection for the motors of summer airconditioning systems.

Unlike motors used in oilheating (motors of oilburners, hot-water circulators, and forced-air blowers of furnaces), most of the motors of airconditioning systems are heavily loaded for their sizes.

Working normally on a severely hot day, a motor driving a refrigeration compressor may be carrying such a heavy load that a load increase of only 20% would burn out its windings—if the motor overload protection device did not go into action to stop the overloaded motor.

In some localities the electrical supply lines serve so many airconditioning units that on severely hot days the continuous operation of these units drops the line voltage. Enough of a voltage drop will cause a compressor motor to burn out—if the motor's overload protection device does not stop the motor to save it.

If you are new at installing and servicing summer airconditioning equipment and you know little or nothing about making certain motors are properly protected against overloads, improve your education now! You can obtain the information you need from the manufacturers of the airconditioning equipment you work on—and from the manufacturers of the motors and the overload protection devices used in this airconditioning equipment.

"I read much about 'false-heat' in connection with room thermostats," a reader of FUELOIL & OIL HEAT says in a letter. "First, there's the familiar electric heating element in an oilburner thermostat that glows when the burner is running, and so gives short oilburner operating periods and smooth heating. This heating element is said to give a heating-system thermostat 'false-heat.'

"Second, in a cooling thermostat of a summer airconditioning system, there's a little electric heater that's warm only when the cooling equipment is idle. When the cooling equip-

Heating season on the way!
Put in a HERCO on your Fall Replacement Jobs. There's a type and size of unit for every installation! Besides, HERCO gives you more value and quality at competitive prices.
OIL BURNERS—Firing rates 0.5 to 20 gph.
BOILER BURNER UNITS—8 sizes, 115 to 840,000 BTU.
HOT WATER SUPPLY BOILERS —7 sizes, 100 to 1000 gph.
WARM AIR FURNACES 12 models, completely assembled.
Write for free catalogs today.
OIL THRIFTY
HERCO
HERCO OIL BURNER CORPORATION, LANCASTER, PA.

FASTEST CHAMBER

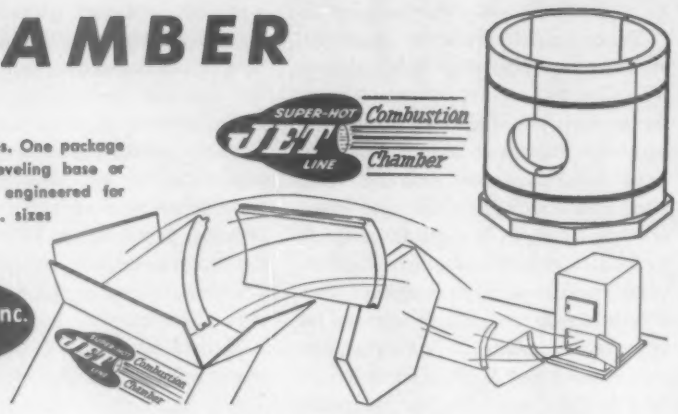
FROM CARTON TO FIRING

So fast . . . so easy to install because there's fewer pieces. One package gives you everything you need including pre-cast self-leveling base or hearth. Designed with maximum combustion area . . . engineered for more complete fuel combustion—Immediate delivery . . . sizes 6/10 to 12 gallons per hour. Write for latest bulletin.

SUPER-HOT JET LINE Combustion Chamber

a product of Grant Wilson inc.
ASBESTOS and INSULATING MATERIALS

141 West Jackson Boulevard • Chicago 4, Illinois
SOLD ONLY THROUGH BETTER JOBBERS EVERYWHERE!



ment is running, this electric heater is turned off. It provides 'cold anticipation.' When warm, this electric resistance heater also gives a thermostat 'false-heat.'

"I understand the warming action provided by such resistances in room thermostats, but I don't know what's meant by the term 'false-heat' in this connection."

First, by way of a mild correction, this inquirer is wrong in saying the heater in an oilburner thermostat "glows" when current passes through it. It becomes only slightly warm; it does not "glow."

Second, the heat given a room thermostat by a heating-anticipation or cooling-anticipation electrical resistance is termed "false" because it does not represent an increase in room temperature, but causes the thermostat to respond as though the room temperature increased.

Suppose the room temperature is 72°F. Arrange an electrical resistance, within a room thermostat, so that it provides the thermostat with 3°F. false heat. The thermostat will respond as though the room temperature had increased to 75°F.

Readers write about other Problems

Q. Occupants of this house include five small children, a maid, the owner and his wife. The three baths are hard worked often, of a morning or evening, and especially after a swim party. Understandably, very often "hot water" from faucets and for dishwasher and clothes washer comes cooler than 110°F., from the 5 gpm tankless water heater in the hot-water heating boiler fired at 1.75 gph.

I know a larger, external new tankless heater would not end the trouble, for according to what you've published firing 1.75 gph does not give boiler enough input Btu's to provide even four gallons of hot water per minute, 100°F. rise.

Question #1: Do you like my idea of installing a 40-gallon tank gas-fired automatic water heater, and giving it hot water from the tankless coil in the oilfired boiler? We'll work fueloil 50% for heating the water, and work gas 50%, or something like that. Gas water heater will be a reservoir or flywheel of the system.

Question #2: To avoid having full-size standby loss of the gas water heater and the big oilfired heating boiler, especially in summer and mildly cold weather, should I set temperature control on the oilfired boiler for only 140°F. or 130°F. standby temperature, when no heat is needed? Boiler temperature automatically rises to 185°F. when room thermostat keeps the circulator running, for that's the way the controls now are arranged.

T. S. C., Earlville, Ill.

A. Answer #1: No! According to our principles, 100% of the Btu's needed to heat water in this home should come from fueloil, zero percent should come from the competitive fuel! Block the use of the competitive fuel in every way, instead of recommending its use! Don't concede that oilfired water-heating equipment cannot do a perfect job of providing all the hot water needed in this home!

First, consider installing a large-enough independent oilfired water

HAYWARD
Rotary Atomizing Burners
¾ to 12 Gph
Boiler-Burner Units
400 to 730 Sq. Ft. EDR Steam
Pressure Atomizing Burners
¾ to 10 Gph
Boiler-Burner Units
200 to 2000 Sq. Ft. EDR Steam
Write for franchise information:
HAYWARD OIL BURNER CORP.
19 Spring Street, Taunton, Mass.
Branch Office:
66 Kirkland St., Cambridge, Mass.

FOR BURIED TANKS

You Can't Beat
FUELGUARD!
The only Remote Reading tank gauge that will fit ANY size tank . . . ANY distance away . . . WITHOUT PIPES OR WIRES!
Write for information today
R. S. TEESDALE CO.
2830 Woodcliff St., S.E. Grand Rapids 6, Mich.

BOSTON DRAFT STABILIZER

WORLD'S MOST ACCURATE DRAFT CONTROL

GUARANTEES CONSTANT DRAFT

and protects your heater against draft variables that destroy efficiency!

NOW AVAILABLE

in 6", 7", 8", 9" and LARGER SIZES up to 24". All available with or without TEE section.

TOPS in ability to hold draft yet the EASIEST to install.

NO WEIGHTS TO ADJUST

Can be properly set, even without instruments.

OPERATE YOUR HEATER AT PEAK EFFICIENCY WITH ACCURATE DRAFT CONTROL

BOSTON DRAFT STABILIZER

1. Slows down travel of gases thru the heater to a desired CONSTANT speed so heater can absorb the heat before it reaches the stack.
2. Holds a constant draft because variations in draft-pull result in changes of air delivery from the burner fan, causing changes in smoke content and CO_2 of your combustion.

Write for complete details

BOSTON MACHINE WORKS COMPANY

Oil Heating Supplies Division, 7-17 Willow St., Lynn, Mass.

SINGLE OR DOUBLE TIER RADIATION SOLVES ALL HEATING REQUIREMENTS

Hoff PANEL LINE

HIGH OUTPUT . . . HANDSOMELY STYLED

BASEBOARD RADIATION

FREE-STANDING OR RECESSED

Rust-resistant electro galvanized steel. Full collar non-ferrous heating element. Snap-on accessories. Panels in 3, 4, 5, 6, 8 ft. lengths.

SINGLE TIER

For normal applications when heating requirements are at a minimum and sufficient wall space is available.

DOUBLE TIER PARALLEL

For cold climates where heating requirements are high. Also for bathrooms, kitchens and playrooms with limited wall space.

DOUBLE TIER SERIES

Equally effective as parallel, with additional advantage of returning to boiler or main without looping back under floor . . . essential where returning under cement slab floor is not practicable. Particularly suited for converting from old hot water or steam systems to baseboard.

Hoff MANUFACTURING CO.

BETHANY, CONN. MEMBER I-B-R

WRITE FOR LITERATURE AND INSTALLATION DATA

Now Is The Time For . . .

"PROFITS IN COOLING"

for

the oilheating dealer

This 44 page booklet contains a series of articles by J. R. Lewis on the airconditioning market. Specifically the opportunities in cooling sales as they apply to the oil heating dealer.

THERE ARE . . .

Valuable charts, diagrams, photographs and tables all related to topics covered in the articles.

IT COVERS . . .

The cooling market . . . the refrigeration cycle . . . compressors and condensers . . . cooling load calculation . . . selecting the airconditioning system . . . maintenance and service . . . sales outlook . . . the heat pump . . . types of units, equipment components . . . estimating cooling loads . . . methods of cutting installation costs.

THE PRICE ..... ONLY $1.00 per copy.

Send your remittance to:

2 West 45th St. fueloil & oil heat New York 36, N. Y.

heater fired by a burner of the pressure, low-pressure, or wall-flame type. Sixty-gallon tank size may suffice, for an oilfired water heater has Btu input and recovery rate far greater than a gas water heater having the same size tank. Arrange the piping so that by simply turning valves on and off you can give the oilfired water heater input water that is cold, or input water that is hot because it comes from the tankless heater in the oilfired heating boiler.

Second, consider installing a large storage tank for hot water, 100 or 120-gallon size. This would be horizontal and located as high as possible. Insulate it excellently with two-inches of rock wool or glass wool or equivalent. To heat the tank, use an external tank-type indirect water heater connected to the oilfired heating boiler, which is large enough to heat all the water in the tank within two hours, 100°F. rise basis with the boiler water at 200°F. Install a tank temperature control to be set at about 140°F., wired to keep the oilburner idle in summer when the tank is warm enough. When the tank needs heat, the burner will be started and stopped by a boiler temperature control set at 200°F.

Q. For the heating season, we have standardized in our country on indoor temperatures of 72°F. to 74°F., according to my observations, for homes, apartment houses, offices, schools, factories, etc. Is there a similar, standard band of indoor temperatures in summer for similar places which are air-conditioned and have summer thermostats?

T. D. F., Beckley, W. Va.

A. A certain heating engineer who has made many tests in the New York metropolitan area declares that a summer thermostat setting of 76°F. or 77°F. seems to please almost all occupants he has encountered.

Q. Tankless water heater on this job worked fine at first, then as four years went by I had to keep on setting the Aquastat higher and higher to provide hot water which is not too cool. In 1955, a setting of 150°F. boiler water gave fine hot water. Now I am up to 220°F., and the water boils and pounds in the boiler in summer with no heat needed from the rads.

What's wrong with this job that's giving me the big headaches?

U. H. S., Brooklyn, N. Y.

A. Something certainly changed greatly for the worse during the four years! If the water-heating load did not increase tremendously, the boiler water almost certainly has become so thick and muddy that it circulates sluggishly through the boiler's water passages and past the tankless heater. You can check this easily by drawing four or five pails of water from the boiler. If you find the water as thick as tomato soup, use the most effective chemical method you know to wind up with clear, clean water in the boiler.

Q. The otherwise excellent boiler heating my own home does collect too much heating-surface soot to please me, during summer months when the burner runs seldom and for a few minutes at a time because of the tankless. I've improved and improved but cannot end this. Considering the nozzle, firing head, combustion chamber, delayed oil valve, draft, etc., etc. all perfect, can you think of one more thing I could do to reduce formation of soot layer.

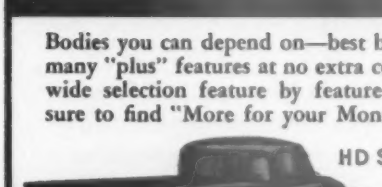
M. S. O., Marshalltown, Ia.

A. With everything simply perfect, we can think of but one improvement that really will help you. Install a 24-hour clock-switch to keep the burner idle each night, say from 9:00 or 10:00 PM until 7:00 AM or some other suitable time. You'll gain a long oilburner operating period each morning, when the burner raises the temperature of the cool boiler. That definitely will lead to cleaner heating surfaces in the boiler.

As a by-product, you'll save enough fueloil throughout the year to make the clock-switch the best investment you'll ever make in your life! In most homes, the clock can be set to open the circuit of the boiler temperature control an hour or two hours before bedtime. Aim for a maximum cold-boiler period each night.

40 VALUE-PLUS MODELS FROM ½ TO 2 TONS

Bodies you can depend on—best built in the industry—with many "plus" features at no extra cost. Compare Morysville's wide selection feature by feature with *any* others. You're sure to find "More for your Money in Morysville".



HD SERIES - 5 MODELS, 5 SIZES

TH SERIES - 5 MODELS, 5 SIZES

HU SERIES
5 MODELS,
5 SIZES

IMMEDIATE DELIVERY
WIDE RANGE OF OPTIONAL EQUIPMENT

MORYSVILLE Body Works INC.
BOYERTOWN, PA.

National Distribution Inquire today for the name of your nearest distributor

Write for FREE Literature

Use "CRESCENT PARTS" Service

Serving St. Louis Trade Area

"FACTORY REBUILT" Repair Exchange control service on all popular makes at regular manufacturers list prices and trade discounts.

CONTROLS
Minneapolis-Honeywell
White-Rodgers
Detroit • Parker Penn
Marvold • General

Crescent Parts and Equipment Co., Inc.
MAIN OFFICE
825-831 S. Boyle Ave.
St. Louis 10, Mo.
BRANCH
1140 St. Louis Ave.
East St. Louis, Ill.

OIL—GAS—STOKER
Parts & Controls
Installations Materials
& Accessories
Heating Specialties

STOP
FUEL TANK LEAKS with MAGNEPATCH

• Powerful Magnet!

SEALS LEAKS FAST - EASY - INSTANTLY

WITHSTANDS TANK PRESSURES AND VIBRATIONS

Powerful magnetic action patch permanently and securely holds all resistant diaphragm seal securely to tank — stops leaks instantly.

REUSABLE

REQUIRES NO TOOLS TO INSTALL

THE TANKIT CO. INC.

560 Belmont Ave,
Newark 8, New Jersey

FIRE BOX

fueloil & oilheat

WANT ADS

Advertisements are payable in advance 75c a line; minimum charge of $4.50 for 6 lines or less.

No Advertising Agency Commissions. No discounts.

NOTICE — Those writing to Box Numbers, address: c/o FUELOIL & OIL HEAT, 2 West 45th St., New York 36.

"K" FACTOR CALCULATOR. Handy, compact slide-rule. Eliminates cumbersome charts. Speedy. Accurate. Single setting gives both K-factor and degree day of usable oil. Only $5.50. Degree Day Systems, Dept. FO, 3930 58th Street, Woodside 77, New York.

MAXIMUM-MINIMUM thermometer. Get the daily high and low temperature for your area. This information necessary to secure mean temperature for degree day system operation. Price $7.95. Degree Day Systems, Dept. FO, Woodside 77, New York.

PETROLEUM PRICE CARDS. Don't stop to figure—just read. Eliminate costly errors. Card shows amounts from 1 to 999 gallons, and bridged from 1000 to 9000 gallons. Will pay you to send for our circular. Degree Day Systems, Dept. FO, Woodside 77, New York.

ALL WEATHER METER TICKETS imprinted with your name, address and telephone. 1000 sets (3 part) only $18.00. Allow 10 days in busy heating season. Advise make and model of truck meter. Degree Day Systems, Dept. FO, Woodside 77, New York.

PRINTED FORMS available for immediate shipment. Heating and oil burner materials form, burner service record cards, service order forms, inspection information form, survey sheet and others. Send for samples, no obligation. Write Dept. FO, Degree Day Systems, Woodside 77, N. Y.

DECALS—Service, nameplate or truck lettering and trademark decals made to your order. Easy to apply, uniform, distinctive, economical for small or large needs. Write for catalog. Mathews Co., 827 S. Harvey, Oak Park, Ill.

TRUCK SIGNS—DECAL TRANSFERS—SERVICE—SALES: No charge for sketch; designed to your specifications. Plastic colors give greater brilliance and durability. Low priced. Easy to apply. Write for samples. Allied Decals, Inc., 8398 Hough Avenue, Cleveland 3, Ohio.

AVAILABLE—Complete facts about pulsation-free, silent, combustion. Write on letterhead for your free copy of detailed, technical, article about a new "break-through" in the field of high-pressure gun burners 0.65 to 1.75 GPH cap. guaranteed pulsation-free with no extra venting regardless of poor draft and with nozzle from 100 to 200°F. cooler. This performance you need to beat fast-growing gas-heat competition. The technical write-up we will send you is from nationally known maker. It is definitely "must reading" for . . . OEM Researchers and Engineers, Fuel Oil Retailers, Oil Heating Equipment Dealers, Service Managers and up-and-coming Installers. Don't miss out on this —write right now. Box 1473, for "Break-thru."

TURN YOUR SURPLUS INVENTORY of stoker, oil burner or gas controls into cash. Mail list and price to Box 885.

BURNER MANUFACTURERS: Outstanding new method for burning oil. Domestic, Commercial, "Gun Type." High-Low Operation. Also for gas and horizontal rotaries. Radical departure from present methods. Oil prices, government policy, make imperative full b.t.u. benefits be extracted from fuel. Five U. S. Patents granted, allowed or pending. Easily adapted to present burner models. Certain applications useful for refrig. and air cond. Requirements: Asking $25,000. initial, advance royalty. Please do not reply unless able and willing to meet this condition. Full information returned as early as possible. Box 1458.

CASH FOR SURPLUS INVENTORY! Dead inventory takes up valuable storage space and costs you money. If you wish to clear out your surplus inventory of gas or oil burner controls and equipment at close-out prices, contact us Now. Send list of parts and best prices to Box 1462.

SALES EXECUTIVE and/or Salesman, available in the Washington, Baltimore, Delaware area. Can handle field men; sell to jobbers and work with them; and also to retailers. Has good record—knows all forms of heating and firing. Will make you a very happy employer, if you get him for a field man, zone manager, or salesman. Excellent references. Box No. 1465.

MANUFACTURERS' AGENTS now calling on heating wholesalers wanted to represent one of the pioneer manufacturers of portable vacuum furnace cleaning equipment. Liberal commission, protected territory. Please give personal history, lines handled and area covered in first letter. Write to W. B. Fitzgerald, Doyle Vacuum Cleaner Company, 225 Stevens St., S.W., Grand Rapids 2, Michigan.

EXPORTERS are invited to quote for oilburner parts, such as pumps, fans, transformers, etc. in quantities of 1,000 pieces, delivered fob New York. Box 1474.

THE FUEL DELIVERY PREDICTOR, which eliminates weather recordings and calculations by the fuel oil dealer, may be used with your established record system and shipping procedure. Order chart calibrated for temperature pattern of your delivery area. Saves time and avoids run-outs. Send check $3.50 for postpaid predictor with complete instructions. Return in 10 days for refund if dissatisfied. Baasch Automatic Delivery System, P. O. Box 14, Floral Park, N. Y.

FUEL OIL EQUIPMENT, New, large-volume, profitable market for men who know the fuel oil business and can talk dealer language. This time-saving, money-making delivery equipment is now being sold in large quantities in many areas. Once system is sold to a dealer, repeat orders follow. Company is expanding in Middle Atlantic States; has some exclusive franchises available to men willing to devote full time to recruiting, training and supervising own salesmen. Box No. 1480.

OIL DELIVERY EQUIPMENT, Very large earnings can be made by man with first-hand knowledge of fuel oil retailing. Every dealer a prospect. Repeat orders. This equipment is selling in big volume in markets now being covered. Territories being opened in New York State, including New York City and Northern New Jersey. Training at our expense. Liberal commission arrangement. Box No. 1481.

WANTED, A man fully experienced in sales and service all types domestic #1 and #2 fuel oil heating units. We are a fuel oil jobber and are adding a burner sales and service department. The man we want should be fully capable of running this department. Location near Raleigh, North Carolina. Write fully and in confidence. Box No. 1482.

SERVICE MANAGER WANTED. Must be qualified to handle entire service department for heavy and light oil for large independent company in central Massachusetts. Give full resume. Write c/o Box No. 1483.

MANUFACTURERS REP will give aggressive jobber or dealer coverage in the Metropolitan area. Experience assures satisfactory handling of new and old accounts in the sale of your products. Please reply to Box 1484.

REPAIR THAT LEAKY FUEL OIL TANK with the new miracle fiberglas plastic, Tank Bond. Put a new bottom in an old leaky tank and make it just as good as new. $3.90 per can or $46.80 per case of 12 cans. One can enough to cover the bottom of a vertical 275-gal. tank. Write Tank Bond, 400 F St., N.E., Washington 2, D. C.

REPRESENTATIVES WANTED—Nationally sold, approved, consumer accepted Seak Heat-Reclaimer—free heat attachment converts waste heat into year round profits. Choice territories still available. For do-it-yourself market, plumbing, heating, hardware, etc., write Dolin Metal Sales Corporation, 315 Lexington Avenue, Brooklyn 16, N. Y.

Model
C-85-FB
OIL-FIRED
85,000 Btu
Output

FLOOR FURNACE with a FILTER

ONLY G/A HAS THESE ADVANTAGES

- 30" HIGH . . . 16½" below joist.
- INSULATED JACKET
- CIRCULATED, FILTERED AIR
- QUIET OPERATION
- RETURN AIR OPENING . . . to facilitate a return-duct if used.
- EASY ACCESS for filter removal or furnace service from top.
- PRE-ASSEMBLED & WIRED

GENERAL AUTOMATIC PRODUCTS CORPORATION

2300 Sinclair Lane
Baltimore 13, Md.
EAstern 7-7703

Get the complete story . . . CALL, WRITE OR WIRE NOW:

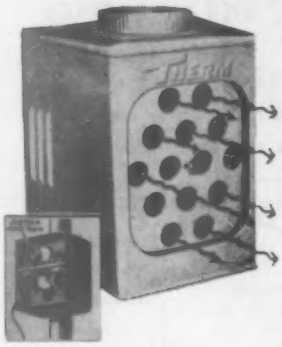
NOW a completely STAINLESS STEEL HUMIDIFIER

the Vaporite NO. 999

- Stainless for greater sales appeal — more profit.
- Re-engineered to avoid troublesome "call-backs"
- Water leveling type . . . new type diaphragm seat.
- Adjustable to water pressure level.
- Competitively priced.
- Guaranteed.

Write today for Free Illustrated Literature

AUTOMATIC HUMIDIFIER CO. • CEDAR FALLS, IOWA



NEW "King Pin" STACK HEATER

- Saves substantially on fuel costs.
- Puts wasted heat to work.
- Center clean-out rod prevents soot accumulation.
- Optional thermostatic control.
- Easy to install.
- Profitable to sell.

Send for low price NOW:

THERM GAS GENERATOR Co., Inc. 2105 Westlake Avenue Seattle 1, Washington

—A—

Airtemp Div., Chrysler Corp. .. 91
American Petroleum Institute ... 119
American-Standard Air Conditioning Div. 100, 101
American-Standard Plumbing and Heating Div. 29
Applied Mechanics Company .99, 110
Ardmore Products Division ... 42
Automatic Humidifier Company . 128

—B—

Babcock & Wilcox Company .. 93
Bacharach Industrial Inst. Co. . 122
Bell & Gossett Company 15
Bethlehem Foundry & Machine Company 92
Boston Machine Works Company 125
Brodie Company, Ralph N. Inside Front Cover
Bryant Manufacturing Company . 18
Budget Meter Company 96

—C—

Chevrolet Motor Division 105
Crane Company, The 107
Crescent Parts & Equipment Co., Inc. 127

—D—

Davis Engineering Corporation . 75
Degree Day Systems 104
Delavan Manufacturing Company 32
Dewey Gas Furnace Company .. 77
Dunkirk Radiator Corp. 120

—E—

Electric Autopulse Division 97
Electrol Burner Manufacturing Co., Inc. 77
Ever-Tite Coupling Company .. 12

—F—

Ford Motor Company 10, 11
Fostoria Pressed Steel Corp., The 106
FUELOIL & OIL HEAT ..108, 109

—G—

General Automatic Products Corp. 127
General Controls Company 47
General Fittings Company 76
Gibraltar Corp. of America ... 122
Goodall Rubber Co., Inc. 38
Gorman-Rupp Co., The 115
Gorton Heating Corporation ... 102
Granberg Corp. 104
Grant Wilson, Inc. 124
Guardian Products Corp. 114
Gulf Oil Corporation 83

—H—

HRB-Singer, Inc. 34
Hannay & Son, Inc., Clifford B. 113
Harvey, Inc., Sid. 24
Hayward Oil Burner Corp. 124
Henry Furnace Company, The .. 27
Herco Oil Burner Company 123
Hoff Manufacturing Co., The .. 125
Hydrovalve Company 99

—I—

Industrial Combustion, Inc. ... 84

—J—

Janitrol Heating & Air Conditioning Div. 111, 112
Johnson Company, S. T. 77
Johnson Fil-Quik Systems 25
Johnson Furnace Company, The 98

—K—

Keeney Mfg. Co. 89
Klemm Automotive Products Company 88
Kraissl Company 74
Krueger Sentry Gauge Company 97

—L—

Lennox Industries, Inc. 116, 117
Liquid Controls Corp. 13

—M—

Mack Trucks, Inc. 39
Maid-O-Mist, Inc. 94
Marlow Pumps 35
Mastercraft Industries, Inc. 14
McDonnell & Miller, Inc. .Back Cover
Minneapolis-Honeywell Regulator Company 30, 31
Monarch Mfg. Works, Inc. Inside Back Cover
Monogram Products Company .. 128
Morysville Body Works 126
Mt. Hawley Mfg. Company ... 40
Mutual Manufacturing Company . 128

—N—

Neptune Meter Company 45
Norwood Products Company .. 46

—O—

OPW Corporation 12, 114
Olsen Mfg. Company, C. A. .. 48

—P—

Penn Controls, Inc. 33
Perfection Industries 86, 87
Plastic & Appliance Company .. 44
Power Flame Division, Inc. ... 79
Premier Company 120
Pullman Vacuum Cleaner Corp. . 93
Purolator Products, Inc. 95

—R—

Rockwell Manufacturing Company 80, 81

—S—

Scovill Manufacturing Company . 17
Scully Signal Company 7, 14
Sette Products Company 110
Skuttle Manufacturing Company 90
Smith Corp., A. O. 23
Steinen Manufacturing Company, Wm. 28
Sun-Ray Burner Mfg. Corp. .. 4
Sundstrand Hydraulics 3

—T—

Tankit Company 127
Teesdale Company, The R. S. .. 124
Therm Gas Generator Company . 128
Thermolok Mfg. Co., Inc. 96
Thrush & Company, H. A. 41
Time Saving Fills, Inc. 16, 118

—U—

Underwood Corporation 43

—W—

Walker Mfg. & Sales Corp. ... 99
Watts Regulator Company 103
Webster Electric Company 26
White-Rodgers Company 85
Williamson Company, The ..36, 37
Wood Company, John 9

LITE-CAST COMBUSTION CHAMBERS

QUICK HEAT LONG LIFE

TONGUE & GROOVE JOINTS • HIGH SIDE WALLS • DOUBLE SEAL BETWEEN FLOOR & WALLS • PRE-CAST FLOOR • AIR SPACE BENEATH FLOOR

MONOGRAM has...

U.S. Pat. No. 2675428

293 Standard Designs and sizes of LITE-CAST Insulating Refractory Combustion Chambers for ALL Boilers and Furnaces.

.75 TO 12 GALLONS PER HOUR

MONOGRAM PRODUCTS CO., INC.

731 NORTH 35th STREET, PHILADELPHIA 4, PA.

EVECO ADJUST-O-DRAFT

DRAFT CONTROL

Fully adjustable for precise accurate setting and instant response to draft variations: ADJUST-O-DRAFT is quality constructed. A cast aluminum ring with built in stops, concealed solid brass bearings, and other features, insure lasting dependability and maximum efficiency when you INSTALL ADJUST-O-DRAFT.

Available in sizes from 5 thru 12 inches.

MUTUAL MANUFACTURING CO.

48-16—162nd St., Flushing, L.I., N.Y.

PULSATION TROUBLE?

LET *Monarch* Help You!

Monarch has eliminated "Pulsation" in thousands of so-called "hopeless" cases. Why not see if we can do the same for you?

Whatever your problem, try Monarch and see why Service Men and more than 400 Oil Burner and Furnace Manufacturers all over the world agree: Monarch Nozzles continue "First Choice of the Industry."

HERE'S WHAT YOU NEED . . .

1. **Monarch F-80-AR series 80° angle nozzle**
2. **Recommended Monarch F-57 Air Cone and H-451 Stabilizer**
3. **Solenoid shut-off Valve for nozzle line**

Set the Monarch equipment according to catalog "O" recommendations and see positive results. These are proven combinations used for years in thousands of installations. They definitely minimize if not completely cure ordinary running pulsation in small highly restricted units.

MONARCH NOZZLE BOXES

Don't jumble nozzles loosely in your tool box if you expect them to be usable. Carry them securely in a sturdy well-built Monarch Nozzle Box. Available for 24 or 48 nozzles. Also, cabinets holding 480 nozzles.

Monarch
MANUFACTURING WORKS, Inc.
2503 E. ONTARIO ST., PHILADELPHIA 34, PA.
Canadian Agent: (Except B. C.)
E. S. Gallagher Sales Ltd., Toronto 12, Canada
Exclusive Agents in all of Europe, Australia and New Zealand

REMEMBER: It costs more to clean a nozzle than to replace with a new, precision, guaranteed-uniform Monarch Nozzle.

The horsepower in your boiler can get thirsty too!
McDONNELL
...Anybody want to buy a cheap Parachute?
YOUR IMPRINT HERE
McDONNELL
But it takes more than a sign to stop low water...
McDONNELL
YOUR IMPRINT HERE
McDonnell
Boiler Water Level Controls and Safety Devices
A WATCHED KETTLE NEVER BOILS... but →
McDONNELL
No. 101

Envelope size folders. Have proven their ability to sell low water cut-offs, feeders, feeder-cut-off combinations. One covers all popular McDonnell products including relief valves. Coupon brings samples.

Checkbook size blotters. Four real sales stimulators. Don't tell us people don't use blotters any more. Contractors have handed out nearly a million of these . . . praise 'em; ask for more! Coupon brings samples.

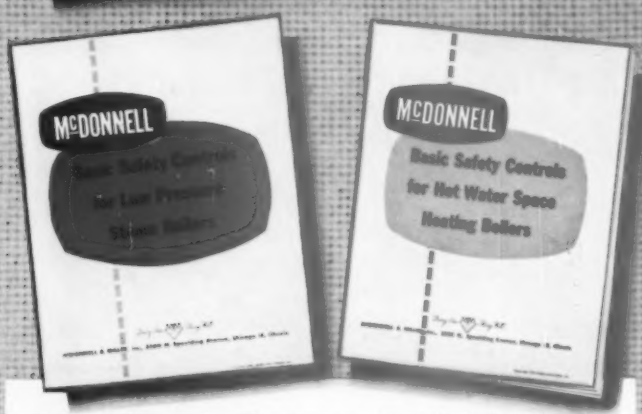
Put these McDONNELL SALES HELPS to work for you!

Look 'em over. They all pack a real sales wallop. Each can do a specialized job for you putting across the good old Sam-you-better-scram idea of Safety-the-McDonnell-Way.

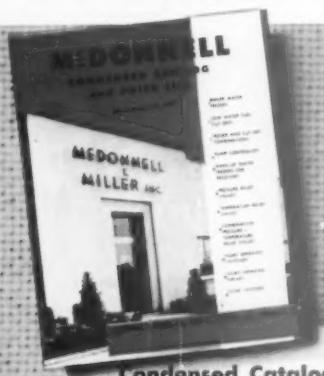
We furnish them, and imprint the mailers, without charge. Simply use the coupon to ask for samples of any you can use.

McDONNELL & MILLER, Inc.
3500 N. Spaulding Ave., Chicago 18, Ill.

Doing One Thing Well



Engineering manuals. But not the technical kind — the kind that enables you to explain the basic purpose of safety controls in a way that *convinces*. One on steam boilers. One on hot water space heating boilers. Coupon brings samples.



Condensed Catalog. Your basic selling tool . . . for your own use; for showing the customer just what he's getting. Coupon brings it.

Your Jobber Stocks McDONNELL Products

CHECK SAMPLES YOU WANT

McDONNELL & MILLER, Inc., 3500 N. Spaulding Ave., Chicago 18, Ill.

Please send samples of sales helps as checked

- ☐ Envelope size folders
- ☐ Blotters
- ☐ Engineering Manuals
- ☐ Condensed Catalog

Company Name_____

Street Address_____

City_____ Zone____ State_____

By_____